Part 121—Operating Requirements: Domestic, Flag, and Supplemental Operations

This change incorporates 5 amendments, adds one paragraph in SFAR 38–2, and revises SFAR 58:

Amendment 121–255, Child Restraint Systems, adopted May 24 and effective September 3, 1996. Section 121.311 is the only section revised. The preamble to this amendment starts on page P–1248.

Amendment 121–256, Operating Requirements: Domestic, Flag, Supplemental, Commuter, and On-Demand Operations: Corrections and Editorial Changes, adopted June 4 and effective July 15, 1996. This amendment adds a new paragraph (d) to § 1 of SFAR 38–2 and the following sections are amended or revised: §§ 121.2, 121.157, 121.317, 121.385, 121.404, 121.406, 121.431, 121.721, and 121.723. The preamble to this amendment starts on page P–1256.

Amendment 121–257, Training and Qualification Requirements for Check Airmen and Flight Instructors, adopted May 30 and effective June 17, 1996. Sections 121.411 and 121.413 are revised and §§ 121.412 and 121.414 are added by this amendment. The preamble to this amendment starts on page P–1258.

Amendment 121–258, Advanced Simulation Plan Revisions, adopted May 30 and effective June 17, 1996. This amendment amends Appendix H. The preamble to this amendment starts on page P–1270.

Amendment 121–259, Aircraft Flight Simulator Use in Pilot Training, Testing, and Checking and at Training Centers, adopted May 23 and effective August 1, 1996. Sections 121.400 and 121.431 are amended and § 121.402 is added by this amendment. SFAR 58 is also revised. The preamble to this amendment starts on page P–1280.

Bold brackets enclose the most recently added or changed material. The amendment number and effective date of new material appear in bold brackets at the end of each affected section.

Page Control Chart

Remove Pages	Dated	Insert Pages	Dated
P–1247 and P–1248	Ch. 14	P–1247 through P–1343	Ch. 15

Suggest filing this transmittal at the beginning of the FAR. It will provide a method for determining that all changes have been received as listed in the current edition of AC 00–44, Status of Federal Aviation Regulations, and a check for determining if the FAR contains the proper pages.

Subpart K	Ch. 14	Subpart K	Ch. 15
Subpart M	Ch. 13	Subpart M	Ch. 15
Subpart N	Ch. 14	Subpart N	Ch. 15
Subpart O	Ch. 13	Subpart O	Ch. 15
Subpart W	Ch. 13	Subpart W	Ch. 15
Appendix H	—	Appendix H	Ch. 15
S–52–3 through S–56–2	Ch. 13	S–52–3 through S–56–2	Ch. 15
S–65 through S–72	Ch. 3	S–65 through S–74	Ch. 15

during the first 2 years after implementation of the rule. Thereafter, the FAA assumes that one-half the airplanes added to the commercial fleet will be placed in service with only one LRCS and one LRNS. The FAA further assumes that the savings resulting from reduced fuel expenditure applies to the equipment conversion of 50 percent of the fleet converting to a single LRCS and a single LRNS.

In each of the first 2 years after the rule becomes effective, the industry will reduce avionics costs by over $2 million. Over the decade 1995–2004, the total savings in 1993 dollars for reduced avionics requirements will exceed $6.7 million. The fuel savings resulting from airplane weight reduction will add another $389,000 in reduced costs, bringing the total cost savings in 1993 dollars for this final rule to more than $7.1 million. The net discounted savings for the decade 1995–2004, will total just over $5.7 million.

The FAA has determined that no safety problem exists with the reduction in requirements for dual LRCS and dual LRNS for certain overwater operations. In the past two decades, the FAA has granted limited exemption from the requirements for dual LRCS and LRNS to certain qualified operators operating in the geographic area. No airplane operating under exemption has had an accident which can be attributed to having only one LRCS or one LRNS. During that time, the accuracy and reliability of navigation equipment has continuously improved. Thus, the FAA believes that this rule presents no degradation in aviation safety in the geographic area.

International Trade Impact Analysis

Domestic air carriers will receive a negligible cost reduction, but there will be no impact on foreign operators. Hence, this rule will have no effect on the sale of foreign aviation products or services in the U.S. or on the sale of U.S. products or services in foreign countries.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) ensures that government regulations do not needlessly and disproportionately burden small businesses. The RFA requires the FAA to review each rule that may have ''a significant economic impact on a substantial number of small entities.''

FAA criteria define ''a substantial number'' as not less than eleven nor more than one-third of the small entities subject to the rule. Among air carriers, a small entity is defined as one which owns, but does not necessarily operate, nine or fewer aircraft. The criteria define ''a significant impact'' as follows: $102,000 for scheduled air carriers with 60 or more seats; $57,000 for scheduled air carriers with fewer than 60 seats.

This amendment is wholly cost relieving. By eliminating the need for two LRCS and LRNS in the geographic area, the estimated cost savings to an operator is $53,000. This savings is less than the threshold amount for small, scheduled operators.

Federalism Implications

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this rule would not have federalism implications requiring the preparation of a Federalism Assessment.

International Civil Aviation Organization and Joint Aviation Regulations

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to comply with ICAO Standards and Recommended Practices (SARP) to the maximum extent practicable. For this amendment, the FAA has reviewed the SARP of Annex 6, Parts I and II, applicable to international commercial air transportation operations and international general aviation operations respectively. The FAA has determined that this rule would not present any differences.

criteria of the Regulatory Flexibility Act. This rule is not significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979).

The Amendment

In consideration of the foregoing, the Federal Aviation Administration amends 14 CFR parts 1, 91, 121, 125, and 135 effective February 26, 1996.

The authority citation for part 121 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 40119, 44101, 44701–44702, 44705, 44709–44711, 44713, 44716–44717, 44722, 44901, 44903–44904, 44912, 46105.

Amendment 121–255

Child Restraint Systems

Adopted: May 24, 1996 **Effective: September 3, 1996**

(Published in 61 FR 28416, June 4, 1996)

SUMMARY: This action withdraws FAA approval for the use of booster seats and vest- and harness-type child restraint systems in aircraft during takeoff, landing, and movement on the surface. In addition, this action emphasizes the existing prohibition in all aircraft against the use of lap held child restraint systems (including belly belts). This action is needed because the FAA has determined that, during an aircraft crash, the banned devices may put children in a potentially worse situation than the allowable alternatives.

FOR FURTHER INFORMATION CONTACT: Donell Pollard, Air Transportation Division (AFS–203), Flight Standards Service, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267–3735.

SUPPLEMENTARY INFORMATION:

Background

The FAA is concerned about the safety of children who use certain forms of child restraint systems aboard aircraft. In 1992, the FAA set forth in §§ 91.107(a), 121.311(b), 125.211(b), and 135.128(a) the child restraint systems acceptable for use in aircraft by imposing labeling requirements and certain use requirements. Since that time the FAA has supplemented these rules with advisory material and with a public information leaflet entitled, ''Child/Infant Safety Seats Recommended for Use in Aircraft.''

In September 1994, the FAA issued a report entitled, ''The Performance of Child Restraint Devices in Transport Airplane Passenger Seats'' (the ''CAMI'' study). The study found that, as a class of child restraint devices, shield-type booster seats, in combination with other factors, contributed to an abdominal pressure measurement higher than in other means of protection while not preventing a head impact. The study found that fundamental design characteristics of shield-type booster seats made their belt paths incompatible with aircraft seat belts. In addition, the study found that vest- and harness-type devices allowed excessive forward body excursion, resulting in the test dummy sliding off the front of the seat with a high likelihood of the child's entire body impacting the seat back of the seat directly in front of it. Rebound acceleration presented further risk of injury. Also, the study found that belly belts allowed the test dummy to make severe contact with the back of the seat in the row in front of the test dummy and that a child may be crushed by the forward bending motion of the adult to whom the child is attached. The research involved dynamic impact tests with a variety of certified child restraints

has not been changed from the rule language that was proposed.

Also, in June 1995, the FAA issued a Report to Congress concerning Child Restraint Systems. A copy of this report is included in the rulemaking docket established for this rulemaking.

Under present regulations a child who has not reached his or her second birthday (infant) is not required to have a separate seat aboard an aircraft. This means that the person accompanying an infant may choose to hold the infant during flight. If the accompanying adult wishes to put the infant in a child restraint system on a passenger seat, the airline may require the adult to purchase a separate ticket for the infant. Whether or not the airline requires the purchase of a ticket for the infant, a separate passenger seat is required if a child restraint is to be used (14 CFR §§ 121.311(c), 125.211(c), and 135.128(b)).

The provisions of §§ 91.107, 121.311, 125.211, and 135.128 identify those child restraints that are approved for use aboard aircraft. These child restraint provisions also apply whenever a child restraint is used for a child 2 years old or older who is required to have a separate seat on the aircraft. A child 2 years old or older must either be properly secured in an approved child restraint or properly secured with a safety belt in a passenger seat.

The FAA's 1992 determination as to which child restraint systems would be approved for use aboard aircraft was based on many years of work by both the FAA and the National Highway Traffic Safety Administration (NHTSA). In the 1970's, NHTSA adopted dynamic testing requirements for child restraint systems for use in automobiles. In the mid 1980's, the FAA and NHTSA undertook an effort to develop a common approach to the approval of child restraints for aircraft use. Federal Motor Vehicle Safety Standard (FMVSS) No. 213 (49 CFR § 571.213) was amended to provide criteria for manufacturers' self-certification of child restraints that were appropriate for both aircraft and automobiles.

FMVSS No. 213, as revised, is the current U.S. standard, and has allowed hundreds of models of seats to be approved, including booster-type child restraint systems (''booster seats'') and vest- and harness-type devices. The current FAA child restraint rules do not specifically refer to FMVSS No. 213. However, FMVSS No. 213 is the basis for the labels required under the FAA rules.

The current FAA rules on child restraint systems permit the use of child restraint systems only if they bear a proper label(s), meet certain use requirements, and meet adult accompaniment requirements.

Approved labels fall into three categories as follows:

1. Seats manufactured to U.S. standards between January 1, 1981, and February 25, 1985, must bear a label that states ''This child restraint system conforms to all applicable Federal motor vehicles safety standards.'' However, vest- and harness-type child restraint systems manufactured before February 26, 1985, are not approved for use on aircraft even if they bear this label.

2. Seats manufactured to U.S. standards on or after February 26, 1985, must bear the following two labels:

(i) ''This child restraint system conforms to all applicable Federal motor vehicle safety standards''; and

(ii) ''THIS RESTRAINT IS CERTIFIED FOR USE IN MOTOR VEHICLES AND AIRCRAFT'', in red lettering.

3. Seats that are not manufactured to approved U.S. standards must bear either a label showing approval of a foreign government or a label showing that the seats were manufactured under the standards of the United Nations. While the current rule language disallows vest- and harness-type child restraint systems manufactured before February 26, 1985, some of these systems manufactured after that date meet U.S., foreign government, or United Nations requirements.

to the existing rules.

The adult accompaniment provisions for child restraint systems require that the child be accompanied by a parent, guardian, or attendant designated by the child's parent or guardian to attend to the safety of the child during the flight.

Discussion of Comments

The FAA received ten comments in response to the proposed rule. The comments were received from Little Cargo, Inc., a child restraint manufacturer; the Association of Flight Attendants (AFA); the Air Transport Association of America (ATA); United Air Lines, Inc. (UAL); two members of the Asia Pacific Cabin Safety Working Group (APCS Working Group); Cosco, Inc., a child restraint manufacturer; the United Kingdom's Civil Aviation Authority (CAA); the Joint Aviation Authorities (JAA); and an individual parent.

UAL supported the proposal, but stated that the effective date of any new regulations should be consistent with reasonable recurrent training schedules. In addition, UAL stated that changes in staff training would result in added costs to air carriers, but they did not quantify these costs.

FAA Response: The FAA has determined that the regulations should be effective in 90 days. UAL did not suggest a specific time frame in its comment, but the FAA has determined that a 90-day effective date should afford air carriers sufficient time to get the necessary information to all affected flight crewmembers and that it is unnecessary to synchronize the dissemination of this information with recurrent training. No data were presented by UAL or other commenters on any cost issues. Compliance costs, however, are discussed in the economic analysis set out in this preamble.

AFA, while supporting the proposal, stated that it continues to actively pursue the mandatory use of child restraint devices. In addition, AFA disagreed with the FAA assertion that if parents must purchase a separate seat to use an approved child restraint device, they would drive rather than fly. They stated that the FAA assumptions on this issue are unrealistic and flawed and do not take into account the impact of low-cost airlines and their enormous appeal to the family/tourist end of the travel market. The AFA stated that a family who is predisposed to buy a ticket would go ahead and purchase a separate ticket to use with an approved and recommended child restraint device.

FAA Response: The FAA has evaluated the costs and benefits associated with child restraint devices three times since 1990. The first report was prepared in 1990, the second report in 1993, and the third report in June 1995. AFA's comment was based on information contained in the second report. The third report, submitted to Congress on June 7, 1995, analyzed alternative scenarios. The scenario analyses concluded that if any significant charge is made for infant occupancy of a seat, the expected result is diversion to automobiles and a net increase in infant and adult fatalities and injuries. The study referenced by AFA was based on information from the second report. The AFA study simply documented observed market behavior associated with the entry of low cost carriers into a market and found that average fares fall and passenger volume increases. These findings are consistent with the FAA's findings and conclusions in all three studies on this issue. In addition, the FAA agrees with the AFA that a family who is predisposed to buy a ticket would purchase a separate ticket to use with an approved and recommended child restraint device. The above studies, however, indicate that very few families seem predisposed to purchasing tickets for their infants.

ATA commented that it was concerned about enforcement issues caused by labels in a foreign language and the problem of determining whether a child is within the weight restrictions for a restraint system. The ATA is also concerned about the overall effectiveness of child restraint systems. In addition, ATA stated that steps must be taken to address the problem of inconsistent FAA guidance and recommended that industry bodies assist the FAA in identifying possible problem areas before they arise.

FAA Response: This rulemaking prohibits the use of booster seats and vest- and harness-type devices by children, even if they bear an approved label. Therefore, enforcement issues concerning labels in

requires manufacturers to label these restraints as not certified for use in aircraft. Also, in conjunction with this rulemaking, the FAA will embark on a public education program designed to provide parents with the information necessary to make an informed decision about the use of child restraint devices on aircraft. The FAA understands that parents may be confused when trying to determine what type of child restraint device is best for their child. If clear guidance is readily available to parents concerning child restraint devices for aircraft, the FAA expects that they will choose an approved device in order to provide the safest traveling environment for their children. The FAA needs the assistance of air carriers, however, to enforce the regulations.

With regard to the ATA's recommendation that industry bodies assist the FAA in identifying possible problem areas before they arise, the FAA always welcomes input from industry and will continue to seek such input on this issue. In response to ATA's concern about inconsistent internal FAA guidance, the FAA notes that information contained in Flight Standards Information Bulletins, Advisory Circulars, etc., will be reviewed to ensure that they correctly reflect the new requirements in this rulemaking, so there should not be any conflicts.

Little Cargo stated that vest- and harness-type devices should not be prohibited until the FAA gathers additional information and performance data on them. It is concerned that the FAA's decision to ban vest- and harness-type devices was based on inadequate testing and that such restraints could be modified to perform satisfactorily. Little Cargo stated that the prohibition of vest- and harness-type devices was based primarily on one uninstrumented test in contrast to the breadth of tests conducted on the other types of child restraint devices.

FAA Response: In response to Little Cargo's concern that only one type of test was performed on the vest- and harness-type device, the FAA notes that during dynamic testing, unacceptable head and body excursions and vertical displacement of the anthropomorphic test dummy was observed to the extent that the type of instrumented tests that other child restraint devices underwent was deemed not necessary for the harness. If the unsafe characteristics that all these devices share change in the future, the prohibition can be re-examined.

Little Cargo also stated that the FAA has significant performance concerns with all available forward facing child restraints, but is only prohibiting certain categories of these devices, including vest- and harness-type devices.

FAA Response: When considering which, if any, child restraint devices should be prohibited, the FAA looked at the alternatives available for children within the weight limits specified by child restraint manufacturers. The FAA has determined that most children who are within the weight specifications of booster seats (30 to 60 pounds) would be better protected in a passenger seat lap belt than in a booster seat because there would be less abdominal loading in a lap belt. For a child in the 30 to 60 pound range, a lap belt should remain across the pelvis and not directly load the abdomen. Because forward facing devices have rigid backs, unlike booster seats, the FAA has determined that children in the 30 to 40 pound range would be better protected in a forward facing device than in a booster seat because there is a decreased risk of abdominal loading in a forward facing device than in a booster seat. In addition, the FAA determined that children who are within the manufacturer's weight specifications of vest- and harness-type devices (25 to 50 pounds) would be better protected in a passenger seat lap belt or a forward facing child restraint device than in a vest- and harness-type device. Forward facing child restraint devices are designed for children from 20 to 40 pounds. While some forward facing child restraint devices do not provide a desired level of protection in a worst case survivable aircraft crash, there are no better alternatives available at this time. Also, because forward facing devices and passenger seat lap belts prevent the extreme body excursions observed in the harness test, most children within this weight specification for vest- and harness-type devices (25 to 50 pounds) would be better protected in either forward facing devices or lap belts.

In addition, Little Cargo stated that, in Notice No. 95–7, the FAA concluded that children weighing between 25 and 50 pounds, and even children under 2 years old, would be safer in a passenger seat

Cargo's concerns about abdominal loading are unfounded.

Little Cargo also questioned whether the impact of excessive submarining is not potentially safer than the excessive head excursion/head strike observed with 6 out of 8 forward facing restraints. Similarly, Cosco questioned why there is more concern for abdominal loading than the high HIC levels evidenced in the forward facing child restraint devices.

FAA Response: While forward facing child restraint devices may not presently provide a desired level of protection in a worst case survivable aircraft crash, there are no better alternatives available at this time. Although Little Cargo and Cosco questioned if submarining is better than the head injury threat seen with forward facing devices, it is important to note that neither the booster seats nor the vest- or harness-type device tested by CAMI performed in a manner that would prevent head impact. It is not correct to say there would be little or no risk of a head injury with booster seats or vest- or harness-type devices. CAMI testing clearly shows that booster seats do not protect the head because of an unacceptable degree of head excursion in an aircraft environment. Forward facing devices, with rigid backs, reduce the risk of exposure to abdominal injury when compared to booster seats. Forward facing devices offer protection from the risk of abdominal injury and, unlike vest- and harness-type devices, prevent excessive body excursion.

Cosco questioned the proposed ban since it was based on a small sampling of booster seats and vest- and harness-type devices. Cosco believes that the problems encountered with the vest- and harness-type device tested are solvable and that all such restraints should not be banned based on the experience of just one.

FAA Response: The FAA has determined that at this time all vest- and harness-type devices have certain inherent critical design factors that preclude them from performing adequately in an aircraft seat. The testing, while only performed on a small sample of such devices, confirmed the basic problems with the design of the devices.

In regard to the FAA's request for comments on whether abdominal loading by itself is a predictor of injury, Cosco stated that rulemaking cannot be predicated on abstract numbers when the baseline for serious injury is undetermined. Cosco also stated that shield-type booster seats keep lap belts off a child's stomach whereas lap belts might become repositioned over the stomach because children often move around so much while in the lap belt.

FAA Response: The FAA acknowledges that the baseline for serious injury from abdominal loading is undetermined. However, the CAMI study found that shield-type booster seats, in combination with other factors, contributed to an abdominal pressure measurement higher than in other means of protection. In certifying aircraft seats and belts, any evidence of abdominal loading is considered grounds for disapproving a design. For many years, the FAA has not approved any design of passenger restraint that showed evidence of imposing restraint loads on the abdomen. It is accepted practice among restraint designers that the abdomen is not a load-carrying body segment. The unique nature of airline seats, where seat back breakover will cause a child in a booster seat to be crushed between the booster seat's shield and the crash forces of the adult in the row behind, are of sufficient concern to the FAA to prohibit the use of booster seats in aircraft during takeoff, landing, and movement on the surface.

The FAA notes that Cosco, like the FAA, seems concerned about the dangers of abdominal loading. In its comment, Cosco states that "in motor vehicles, children often move around so much that the lap belt becomes repositioned over the stomach, where it can cause serious injury in even a minor crash . . . Therefore, a shield booster, which keeps the lap belt off the child's stomach would be a significant improvement in most cases . . ." In addition, Cosco states that shield-type booster seats, which keep a lap belt off a child's stomach, would be a significant improvement in rough landings, even if its crash protection were less than a lap belt alone (since survivable crashes are so rare).

the use of booster seats only during take off, landing, and movement on the surface. It does not prohibit their use inflight. Therefore, parents can consider their booster seats as carry on baggage, use the restraints during the cruise portion of flight, and still have them readily available when they reach their destination. These devices can be stowed in overhead bins, in coat closets, or in some cases under seats. Except for storing the devices during takeoff, landing, and movement on the surface, this process is no different that the process a parent would go through before the prohibition. While the FAA encourages parents to use devices that may be used throughout the flight, the devices banned by this rule may be used during cruise.

Cosco also believes that parents may opt to fly with children on their laps rather than carry on a forward-facing or convertible child restraint device. They also stated that an educated parent would not buy a ticket in order to use an approved child restraint device instead of a vest- and harness-type device. They stated that a harness is much more convenient to carry around than a convertible forward-facing seat and therefore the parent may fly with a child or his/her lap rather than carry a convertible forward-facing seat. Little Cargo also expressed concerns that, when considering the alternatives of lap-holding a child, using the passenger seat lap belt alone, or bringing an approved convertible child restraint system, parents will likely not choose to carry on a bulky restraint.

FAA Response: While the FAA agrees with Cosco and Little Cargo that a vest- and harness-type device is probably easier to carry than a convertible forward facing child restraint device, for most parents the cost of an airline passenger seat for the infant is probably more important to the parent than the ease of carrying a child restraint device. Since the commenters did not provide any specific information or statistics on this issue, the FAA continues to believe that parents who are predisposed to buy a ticket for a separate airplane seat for use with a booster seat or vest- and harness-type device and who have received education on the effectiveness of the allowable alternatives in advance of purchasing tickets would purchase a ticket for a separate seat in order to use an approved and recommended child restraint device.

In addition, Cosco commented that, of the four booster seats tested, head excursions for two did not exceed the limits set forth in FMVSS No. 213.

FAA Response: Although Cosco stated that of the four booster seats tested, two did not exceed the limits of FMVSS No. 213, in actuality one of the two booster seats that supposedly did not exceed the limits of FMVSS No. 213 disintegrated during the test and could not be analyzed for head excursion. The fact that of the four booster seats tested, head excursion for one did not exceed the limits set forth in FMVSS No. 213 is not relevant to the decision to ban shield-type booster seats. As discussed earlier, seat back breakover, a unique feature of aircraft seats, presents a threat of abdominal injury. Backless booster seats, by virtue of fundamental design characteristics, do not provide protection from this threat. That one of the four booster seats tested did not exceed the head strike envelope specified in FMVSS–213 has no bearing on the threat of abdominal injury.

Cosco also stated that the primary benefit of child restraints on aircraft is to restrain children in the event of turbulence. They stated that while certain types of child restraint devices do not perform well in crash situations, this should not preclude their overall use since crashes are rare while turbulence is not.

CAA was also concerned about prohibiting devices that can prevent injury in common occurrences such as flight turbulence.

FAA Response: The FAA is not prohibiting the use of booster seats and vest- and harness-type devices in cruise portions of flight. The FAA acknowledges that booster seats and vest- and harness-type devices might prevent injuries during turbulence and therefore is not prohibiting their use during cruise portions of flight.

Cosco stated that a design-restrictive ban precludes development of future products that may prove safe and would be more convenient for parents to use.

to travel by air, notwithstanding the additional cost. CAA also states that it is reasonable to conclude that there will be an increase in the number of people who will carry their children without any form of restraint if this continues to be permitted.

FAA Response: The FAA's 1995 study on the costs and benefits associated with child restraint devices addresses CAA's comment that the alternative to travel by private car will not be viable, so passengers will continue to travel by air notwithstanding the additional cost. While the FAA agrees that a significant number of families taking long trips will continue to do so even if a charge is imposed for passenger seats occupied by infants, the scenario analyses concluded that if any significant charge is made for infant occupancy of a passenger seat, there will be some passenger diversion to automobiles and a net increase in infant and adult fatalities and injuries. The scenario analyses also concluded that families taking longer trips are less likely to divert to alternative modes of transportation than people taking shorter trips. The FAA agrees that there are cases where parents would fly rather than not take a trip because they do not have a practical second alternative to flying. In most cases, however, parents have an alternative to flying. In the 1995 report, the FAA again found that mandating child restraint devices could cause more deaths and injuries than it would prevent. Therefore, the FAA will not mandate the use of child restraint devices for children under 2 years old. A copy of the report is included in the docket established for this rulemaking. In addition, the FAA will pursue an education program to better inform parents about child restraint devices. If clear guidance is readily available to parents, the FAA expects that they will choose an approved device, rather than lap holding their children, in order to provide the safest traveling environment for their children.

CAA and JAA state that they permit the belly belt on the grounds that it provides a measure of protection to children and/or other passengers versus lap holding a child.

FAA Response: The FAA would like to emphasize that belly belts are not permitted under current regulations. Even if belly belts do provide some measure or protection, the CAMI study found that belly belts allowed the test dummy to make severe contact with the back of the seat in the row in front of the test dummy and that a child may be crushed by the forward bending motion of the adult to whom the child is attached. Consideration of revising this current prohibition is beyond the scope of the notice.

The JAA also stated that in a crash or severe air turbulence, parents are often unable to keep a lap-held child in their arms.

FAA Response: As discussed earlier, the FAA has determined that mandating child restraint devices could cause more deaths and injuries than it would prevent. However, the FAA does not encourage lap-holding children. The FAA expects, with its education campaign providing clear guidance on child restraint devices, parents will choose an approved device, rather than lap holding their children, in order to provide the safest traveling environment for their children. The two members of the APCS Working Group submitted identical letters that discussed the need to mandate restraints for children. In addition, they stated that the FAA's argument that the extra cost to families caused by mandating child restraint devices would force them to less safe road travel is invalid since the same cost situation arises when the child is 3 or 4 or 10 years old.

FAA Response: The APCS Working Group's argument is that the extra cost to families of mandating child restraint devices is no more of a deterrent to air travel than the price of a ticket for a child of any age. However, the FAA notes that this argument does not take into account that ordinarily there is no charge for a lap-held child, whereas certificate holders very often do charge if a seat is requested for this infant. Thus, many people would switch to less safe automobile travel as a result of mandating child restraint usage because unlike most rulemakings where the compliance costs are passed along to all travelers, mandatory use of child restraint would impose compliance costs only on families with infants.

Other commenters raised comments that are beyond the scope of this rulemaking, such as providing design/certification standards for child restraint systems that are compatible with existing aircraft seat

In accordance with the Paperwork Reduction Act of 1980 (Pub. L. 96–511), there are no requirements for information collection associated with this final rule.

Economic Analysis

Changes to Federal regulations are required to undergo several economic analyses. First, Executive Order 12866 directs each Federal agency to propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic effect of regulatory changes on small entities. Third, the Office of Management and Budget directs agencies to assess the effect of regulatory changes on international trade. With respect to this regulation, the FAA has determined that it: (1) is "a significant regulatory action" as defined in the Executive Order; (2) is significant as defined in the Department of Transportation's Regulatory Policies and Procedures; (3) will not have a significant impact on a substantial number of small entities; and (4) will not constitute a barrier to international trade. The FAA does not believe that this regulation will impose any significant costs on the public. Therefore, a full regulatory analysis, which includes the identification and evaluation of cost-reducing alternatives to this regulation, has not been prepared. Instead, the agency has prepared a more concise analysis of this regulation that is presented in the following paragraphs.

Costs and Benefits

There will be some compliance costs associated with this regulation. This rule will reduce the types of child restraint systems that can be used during ground movement, takeoff, and landings by prohibiting the use of all booster seats and vest- and harness-type child restraint systems during these phases of a flight. The restrictions on the use of these devices will need to be incorporated into flight attendant training and included in flight manuals, and this will impose additional costs on air carriers. For a period of time after the rule becomes effective, there will also be some public education necessary and potential flight delays when flight attendant tell parents who brought prohibited child restraint devices on board the aircraft that the devices are banned for use during takeoff, landing, and movement on the ground. The FAA has determined that booster seats and vest- and harness-type devices put children in a potentially worse situation than the alternatives during an aircraft crash. According to the CAMI study, these child restraint systems do not securely hold a child in place in an aircraft crash, and may themselves even cause harm to a child in the event of a crash. These types of accidents, while they rarely happen, usually occur during the takeoff or landing phases of a flight. Thus, prohibiting the use of these child restraint systems during takeoff and landing will enhance the child's safety, and the safety benefits will outweigh the slight compliance costs discussed above. Since it is impractical to expect flight attendants to monitor whether children are out of banned devices just prior to takeoff, the FAA is prohibiting the use of these devices during movement on the surface also.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress to ensure that small entities are not unnecessarily or disproportionately burdened by Federal regulations. The RFA requires a Regulatory Flexibility Analysis if a rule will have "a significant economic impact on a substantial number of small entities." FAA Order 2100.14A outlines FAA's procedures and criteria for implementing the RFA. Small entities are defined as independently owned and operated small businesses and small not-for-profit organizations.

This rule will impose some unquantified costs on air carriers. These costs include changing manuals and training flight attendants about the restrictions on the use of certain child restraint devices. Initially, there may be some public education necessary and possible flight delays when flight attendants tell parents or guardians that they may not use certain child restraint devices during ground movement, takeoff, or landing. However, the FAA believes that this rule will not have a significant economic impact on a substantial number of small entities.

will not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Conclusion

Because of the substantial interest of the public in this subject matter, and based on the findings in the Regulatory Flexibility Determination and the International Trade Impact Analysis, the FAA has determined that this regulation is a significant regulatory action under Executive Order 12866. For the same reason, this rule is considered significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). In addition, it is certified that this rule will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. Because the economic impact of this rule is considered minimal, a formal regulatory evaluation has not been prepared.

The Amendment

In consideration of the foregoing, the Federal Aviation Administration amends parts 91, 121, 125, and 135 of the Federal Aviation Regulations (14 CFR parts 91, 121, 125, and 135) effective September 3, 1996.

The authority citation for part 121 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 40119, 44101, 44701–44702, 44705, 44709–44711, 44713, 44716–44717, 44722, 44901, 44903–44904, 44912, 46105.

Amendment 121–256

Operating Requirements: Domestic Flag, Supplemental, Commuter, and On-Demand Operations: Corrections and Editorial Changes

Adopted: June 4, 1996 **Effective: July 15, 1996**

(Published in 61 FR 30432, June 14, 1996)
(Corrected in 61 FR 35628, July 8, 1996)

SUMMARY: This amendment adopts changes that are editorial or typographical in nature in parts 119, 121, and 135. The changes are necessary to correct errors or clarify the intent of the regulations published on December 20, 1995 (60 FR 65832). The changes in this amendment will not impose any additional restrictions on persons affected by these regulations.

FOR FURTHER INFORMATION CONTACT: Linda Williams, Office of Rulemaking (ARM–100); Federal Aviation Administration, 800 Independence Avenue, SW, Washington, DC 20591; telephone (202) 267–9685.

SUPPLEMENTARY INFORMATION:

Background

On December 20, 1995, new part 119, Certification: Air Carriers and Commercial Operators, was published in the *Federal Register* (60 FR 65832; December 20, 1995). Part 119 reorganizes, into one part, certification and operations specifications requirements that formerly existed in SFAR 38–2 and in parts 121 and 135. The final rule for new part 119 also deleted or changed certain sections in part 121, subparts A through D, and part 135, subpart A, because the requirements in those subparts have been recodified in part 119. Also on December 20, 1995, a final rule was published that upgrades the training requirements for part 121 operators and requires certain part 135 operators to conduct their

119 and the beginning of the transition process for commuter operations affected by the final rule published on December 20, 1995, a number of questions of interpretation have been raised and errors in previous final rules have been identified. The changes in this document make necessary corrections and will help to clarify the intent of part 119, the training rule, and the commuter rule.

Preamble Correction

In the preamble to the commuter final rule, the FAA attributed a comment incorrectly. The statement on 60 FR 65872 that the Regional Airline Association recommends that the FAA require each certificate holder to equip its airplanes with TCAS II and a Mode S transponder was incorrect. This recommendation was made by the Air Line Pilots Association.

Editorial Changes

A number of changes are necessary in parts 119, 121, and 135 to correct typographical errors, to make minor editorial changes that help clarify the intent of the rules, or to make editorial changes that make related rules consistent with each other. These types of changes are not individually explained. However, a number of changes are being made that require some explanation, which follows:

1. Section 119.2 and SFAR 38–2 are amended to reinstate certain part 121 and 135 sections that were removed by the commuter rule to make it clear that persons who originally were certificated under SFAR 38–2 must continue to comply with those sections in parts 121 and 135, that have been recodified into part 119, until they receive new operations specifications issued under part 119, or until March 20, 1997, whichever occurs first.

2. New paragraph (j) is added to § 121.2 to clarify how crewmembers and certificate holders transitioning to part 121 can obtain credit for training and qualification obtained under part 135.

3. Section 121.404 is amended by correcting the date in the introductory paragraph to March 19, 1998, as was originally published in the Air Carrier and Commercial Operator Training Programs (60 FR 65940, December 20, 1995).

4. Sections 121.721, 121.723, and 135.43 are amended to clarify the status of international crewmember certificates. The FAA no longer issues these certificates because the State Department no longer processes them; however crewmembers who already have been issued these certificates may continue to use them.

5. Sections 121.431 and 135.3 are revised to remove the redundant phrase ". . . or with airplanes having a passenger seating configuration of 10 seats or more."

Corrections to Tables

Several additional corrections are necessary for Tables 2–4, which were originally published on December 20, 1995 (60 FR 65850, 65888, 65890) and were republished on January 26, 1996 (61 FR 2618, 2619, and 2621), as follows:

1. In Table 2—Comparable Sections in Parts 121 and 135, the word "underwater" in the listing under Subpart K should be "overwater."

2. In Table 4—Distribution Table for Part 119, correct the listing for § 121.5, which was replaced by § 119.21(a), not § 119.49(a).

Federalism Implications

The regulations do not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among various levels of government. Thus, in accordance with Executive Order 12612, it is determined that such a regulation does not have federalism implications warranting the preparation of a Federalism Assessment.

no additional burden on the public, I find that notice and opportunity for public comment before adopting this amendment is unnecessary.

Conclusion

The FAA has determined that this regulation imposes no additional burden on any person. Accordingly, it has been determined that the action: (1) is not a significant rule under Executive Order 12866; and (2) is not a significant rule under Department of Transportation Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); Also because this regulation is of editorial nature, no impact is expected to result and a full regulatory evaluation is not required. In addition, the FAA certifies that the rule will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

The Amendments

In consideration of the foregoing, the Federal Aviation Administration amends the Federal Aviation Regulations (14 CFR parts 119, 121, and 135) effective July 15, 1996.

The authority citation for part 121 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 40119, 44101, 44701–44702, 44705, 44709–44711, 44713, 44716–44717, 44722, 44901, 44903–44904, 44912, 46105.

Amendment 121–257

Training and Qualification Requirements for Check Airmen and Flight Instructors

Adopted: May 30, 1996 **Effective: June 17, 1996**

(Published in 61 FR 30734, June 17, 1996)
(Corrected in 61 FR 34927, July 3, 1996)

SUMMARY: Some experienced pilots who would otherwise qualify as flight instructors or check airmen but who are not medically eligible to hold the requisite medical certificates, cannot perform flight instructor or check airmen functions even in simulators. This rule establishes separate requirements for check airmen who check only in flight simulators and flight instructors who instruct only in flight simulators. To ensure an equivalent level of safety, the affected check airmen and flight instructors must accomplish the following: Recency of experience requirements; completion of an approved line observation program within each 12-month period; and required training, including recurrent ground and flight training. Additionally, this rule allows check airman and flight instructors to obtain all of their flight training in simulators, as opposed to the current scheme in which initial and transition flight training must include an in-flight element.

EFFECTIVE DATE: This final rule is effective June 17, 1996. See below in the "Modifications" section for the justification for making this rule effective on June 17, 1996, and for a discussion about 9-month compliance dates for two new requirements. Affected parties do not have to comply with the information collection requirements in §§ 121.411(d), 121.412(d), 135.337(d), and 135.338(d) until the Federal Aviation Administration publishes in the *Federal Register* the control number assigned by the Office of Management and Budget (OMB) to these information collection requirements. Publication of the control number notifies the public that OMB has approved these information requirements under the Paperwork Reduction Act of 1995.

Persons interested in being placed on the mailing list for future rules should request from the above office a copy of Advisory Circular No. 11–2A which describes the application procedure.

Background

The requirements for training, checking, and qualification of check airmen and flight instructors who perform training and checking for certificate holders operating under Title 14 of the Code of Federal Regulations parts 121 and 135 appear in §§ 121.411 and 135.337 (check airman and flight instructor qualification) and §§ 121.413 and 135.339 (check airman and flight instructor training and checking).

When parts 121 and 135 were implemented, the primary means of training was in an aircraft. Therefore there was a requirement for check airmen and flight instructors to hold appropriate medical certificates. Even after flight simulators came into use in the late 1970s, check airmen and flight instructors were likely to use both aircraft and flight simulators. Despite significant changes in methods of training, particularly an increased use of flight simulation in training, the sections of parts 121 and 135 mentioned above have not been significantly revised in over 20 years. These sections still focus primarily on check airmen and flight instructors who perform their functions in airplanes.

Today, flight simulators and flight training devices are so sophisticated that they are used to conduct most training and checking with significant benefits to safety. Training and checking in simulators and flight training devices have distinct advantages over training and checking in flight. Flight simulators provide a safe flight training environment, more comprehensive training, and may reduce the number of training and in-service accidents by allowing training for emergency situations that cannot be safely conducted in flight. The use of flight simulators and flight training devices in lieu of aircraft has resulted in a reduction in air traffic congestion, energy use, noise, air pollution and training costs.

Some experienced pilots who would otherwise qualify as flight instructors or check airmen but who are not medically eligible to hold the requisite medical certificates, cannot perform check airmen functions or many flight instructor functions even in simulators. Thus the regulations do not establish separate categories of requirements for check airmen who check only in flight simulators or for flight instructors who instruct only in flight simulators. A number of highly experienced airmen who might serve as flight instructors or check airmen, including former military pilots, former air carrier pilots, and furloughed pilots, as well as other experienced pilots, currently are unable to perform those training and checking functions because they are unable to hold an airman medical certificate.

This rule allows experienced check airmen and flight instructors who are not able to hold a current medical certificate to check or instruct in flight simulators and flight training devices. Under this rule, affected check airmen and flight instructors must meet similar requirements that a pilot flying the line is required to meet, such as initial training, proficiency checks, and competency checks and could use flight simulators to meet these similar requirements. This rule also addresses check airmen in aircraft, check airmen in flight simulators or flight training devices, flight instructors in aircraft, and flight instructors in flight simulators or flight training devices.

The Air Carrier Training Working Group of the Aviation Rulemaking Advisory Committee (ARAC) recommended that the FAA amend its regulations so that airmen who were not eligible to hold medical certificates would nonetheless be eligible to instruct or check pilots and other airmen in simulators. On July 16, 1992, ARAC forwarded draft rule language for the FAA to review. The FAA used ARAC's draft as the basis for developing this rule.

Discussion of the Rule

This rule revises the following sections of parts 121 and 135: §§ 121.411, 121.413, 135.337, and 135.339; it adds the following four new sections: §§ 121.412, 121.414, 135.338, and 135.340.

The most significant changes between the current and new rules are as follows:

functions, by flying two flight segments as a required crewmember for the type aircraft involved, if medically qualified and certificated, or by completing an approved line-observation program.

(4) Training requirements for check airmen and flight instructors who serve in training programs under parts 121 and 135 are in §§ 121.413, 121.414, 135.339, and 135.340. This rule changes these requirements in the following ways:

- A new requirement is imposed for check airmen and flight instructors in that they must satisfactorily complete, within the preceding 24 calendar months, an observation check of their check airman or flight instructor functions. This check may be accomplished in a flight simulator or in a flight training device as appropriate.
- Flight instructors are required to have much of the same ground training requirements as check airmen. As a practical matter, ground training for flight instructors and check airmen are the same; however, the current rules are not specific in this area. This change ensures that flight instructors and check airmen receive the same ground training.
- Currently, initial and transitional flight training for check airmen and flight instructors who perform their functions in-flight requires in-flight training and practice. This rule allows this training to take place in simulators or in flight training devices.

These changes allow certain experienced pilots who are unable to meet current medical certificate requirements to be able to check and instruct, but only in flight simulators and flight training devices. To allow this flexibility while maintaining safety, this rule requires flight instructors (simulator) and check airmen (simulator) to meet recency of experience requirements, take observation checks of their check airman/instructor abilities once every 2 years, complete the required recurrent training necessary to serve as a pilot-in-command under parts 121 and 135 or a flight engineer or flight navigator under part 121, and complete required proficiency or competency checks. A detailed section-by-section description of the rule follows.

Section-by-Section Analysis

§ 121.411 Qualifications: Check Airmen (Airplane) and Check Airmen (Simulator)

Current § 121.411(a)(1) requires that a flight instructor or check airman who serves in a training program under part 121, for the particular airplane type involved, hold the airman certificates and ratings that must be held in order to serve as a pilot in command (PIC), a flight engineer, or a flight navigator, as appropriate, in operations under part 121. Current § 121.411(a)(6) requires that a check airman or flight instructor who serves in a training program under part 121 must hold at least a Class III medical certificate. Under current § 121.411(b)(1) a simulator instructor, instructing for a course of training in an airplace simulator as provided in § 121.409(b), must hold an airline transport pilot (ATP) certificate but need not hold an airman medical certificate if only giving proficiency checks as specified in § 121.441 and § 121.409(b). Under the current rules, if a simulator instructor is providing instruction for anything other than a proficiency check (e.g., upgrade training), then he or she must have a medical certificate. (See current § 121.411(a).)

Section 121.411 is revised to change the applicability from check airmen and flight instructors to check airmen (airplane) and check airmen (simulator). Flight instructors are covered under new § 121.412. New paragraph (a) of § 121.411 states that a check airman (airplane) is a person who is qualified and permitted to conduct flight checks and instruction in an airplane, in a flight simulator, or in a flight training device for a particular type airplane. A check airman (simulator) is a person who is qualified to conduct flight checks only in a flight simulator or in a flight training device for a particular type aircraft.

New paragraph (b) contains the eligibility requirements to serve as a check airman (airplane). With some editorial revisions and an additional requirement to satisfy the recency of experience requirement

or in a qualified simulator. In addition, current § 121.411(c), which grants training relief to check airmen, flight instructors, and simulator instructors who were designated before December 22, 1969, is deleted since the FAA believes that this provision is obsolete.

New paragraph (d) is added to clarify that the completion of the requirements of (b)(2), (3), and (4) or (c)(2), (3), and (4), whichever is applicable, must be entered into the operator's records for each individual check airman.

New paragraph (e) is added to restate the portion of current § 121.411(a)(6) allowing airmen who have passed their 60th birthday or who do not hold a medical certificate to perform check airmen functions, but, under this paragraph, these airmen may not serve as crewmembers under part 121 operations.

New paragraph (f) is added to offer an alternate method for maintaining recency of experience requirements for check airmen (simulator). Under this rule, check airmen (simulator) must, within the 12-month period preceding the performance of check airman duties, either fly two segments as a required crewmember for the type airplane or satisfactorily complete an approved line-observation program.

New paragraph (g) is added to provide that the recency of experience requirements of paragraph (f) may be completed in the calendar month before or the calendar month after the month in which it is due.

§ 121.412 Qualifications: Flight Instructors (Airplane) and Flight Instructors (Simulator)

The requirements for this section are virtually identical to those in § 121.411 for check airmen. Additionally, this section specifies that an individual who does not hold a medical certificate may not function as a flight instructor in an airplane.

§ 121.413 Initial and Transition Training and Checking Requirements: Check Airmen (Airplane) and Check Airmen (Simulator)

Paragraph (a)(1) maintains the current requirement that, in order to serve as a check airman, a person must have completed initial or transition check airman training. Additionally, paragraph (a)(2) requires an observation check of check airman functions within the preceding 24 calendar months. The observation check may be done in part or in full in an airplane, in a flight simulator, or in a flight training device as appropriate. An FAA inspector or an aircrew designated examiner employed by the operator may administer this observation check. The FAA believes that the observation check requirement better ensures that check airmen maintain their qualifications and their abilities to perform all other duties as appropriate for check airmen.

In paragraph (b) the observation check requirement of paragraph (a)(2) could be accomplished in the month before or the month after the month in which it is due.

Paragraph (c) of this section covers initial ground training requirements for check airmen. Most of the requirements are in current paragraphs (a)(1) through (a)(6) of § 121.413; however, some editorial revisions have been made.

Paragraph (d) covers transition ground training for check airmen. This paragraph separates transition ground training requirements from initial ground training requirements, but imposes no new requirements since transition and ground training are currently required in § 121.413(a)(6).

Paragraph (e) is added to cover initial and transition flight training for pilot check airmen (airplane), flight engineer check airmen (airplane), and flight navigator check airmen (airplane). Paragraph (e) contains requirements equivalent to those contained in current § 121.413(c) and (d), but places greater emphasis on the safety issues required during checking that takes place under actual flight. Additionally, it broadens the scope of current § 121.413(c) to include flight engineers (airplane) and flight navigators (airplane). The FAA believes that the flight engineer (airplane) and flight navigator (airplane) safety functions are as important to the safe conduct of a flight as that of the check airman (airplane).

is appropriate because of the proven effectiveness of flight simulator training. Flight training devices can be used to fulfill the training requirements for the same reasons.

Paragraph (g) is added to establish initial and transition flight training for check airmen (simulator). The requirements include training and practice in the required normal, abnormal, and emergency procedures and training in the operation of flight simulators or flight training devices. Under this paragraph, the training may be conducted in flight training devices or flight simulators as appropriate. The requirements are necessary to establish flight training requirements specifically for check airmen (simulator) who are qualified to conduct flight checks or instruction only in a flight simulator or in a flight training device.

§ 121.414 Initial and Transition Training and Checking Requirements: Flight Instructors (Airplane) and Flight Instructors (Simulator)

The requirements for this section are identical to the provisions in § 121.413 except that the terms and references apply to flight instructors. The required observation check is an observation check of instructor functions, and includes the current requirement for training in teaching methods and procedures except for the holders of a flight instructor certificate.

§ 135.337 Qualifications: Check Airmen (Aircraft) and Check Airmen (Simulator)

Section 135.337(a)(1) currently requires that a flight instructor or check airman serving in a training program under part 135, for the particular aircraft type involved, must hold the airman certificate and ratings that must be held to serve as a PIC in operations under part 135. Section 135.337(a)(5) currently requires that such a flight instructor or check airman hold a Class I or Class II medical certificate required to serve as a PIC in operations under part 135. Under current § 135.337(a)(7), a check airman who serves in an aircraft simulator only must hold a Class III medical certificate. Section 135.337(b) currently requires that a person who serves as a simulator instructor for a course of training in an aircraft simulator must hold at least a commercial pilot certificate.

This rule changes the applicability of this section from check airmen and flight instructors to check airmen (aircraft) and check airmen (simulator). Flight instructors are covered under new § 135.338. Paragraph (a) of § 135.337 states that a check airman (aircraft) is a person who is qualified and permitted to conduct flight checks and instruction in an airplane, in a flight simulator, or in a flight training device for a particular type, class, or category aircraft. A check airman (simulator) is qualified to conduct flight checks only in a flight simulator or in a flight training device for a particular type, class, or category aircraft.

Paragraph (b) contains the eligibility requirements to serve as a check airman (aircraft). With some editorial revisions and an additional requirement to satisfy the recency of experience requirement of § 135.247, the eligibility requirements remain the same as current requirements. The recency provision is added to ensure equivalent recency of experience for those check airmen who may not be flying line operations.

Paragraph (c) of § 135.337 is added to establish the eligibility requirements for check airmen (simulator). These requirements are the same as those for check airmen (aircraft) paragraph (b) with two exceptions. There is no requirement to hold a medical certificate and the recency of experience requirements of new § 135.337(b)(3) are not required of part 135 check airmen (simulator). Check airmen (simulator) instead are allowed to meet the recency of experience requirements of paragraph (f), discussed later in this section.

Paragraph (d) is added to clarify that the completion of the requirements of (b)(2), (3), and (4) or (c)(2), (3), and (4), whichever is applicable, must be entered into the individual check airmen's training record.

Paragraph (e) is added to clarify that an airmen who does not hold a medical certificate may perform check airmen functions, but may not serve as a crewmember under part 135 operations.

The requirements for this section are virtually identical to those in § 135.337 for check airmen. Additionally, this section clarifies that an individual who does not hold a medical certificate may not function as a flight instructor in an aircraft.

§ 135.339 Initial and Transition Training and Checking Requirements: Check Airmen (Aircraft) and Check Airmen (Simulator)

Paragraph (a)(1) continues the current requirement that, in order to serve as a check airman, a person must have completed initial or transition check airman training. Additionally, paragraph (a)(2) requires an observation check of check airman functions within the preceding 24 calendar months. The observation check may be done in part or in full in an airplane, flight simulator, or flight training device as appropriate. An FAA inspector or an aircrew designated examiner employed by the operator may administer the observation check. The FAA believes that the observation check requirement better ensures that check airmen maintain their qualifications and their abilities to perform all other duties as appropriate for check airmen.

In paragraph (b) the observation check requirement of paragraph (a)(2) may be accomplished in the month before or the month after the month in which it is due.

Paragraph (c) of this section covers initial ground training requirements for check airmen. Most of the requirements are in current paragraphs (a)(1) through (a)(6) of § 135.339. Some editorial revisions are made in this rule.

Paragraph (d) is added to cover transition ground training for check airmen. This paragraph separates transition ground training requirements from initial ground training requirements, but imposes no new requirements since transition and ground training are currently required in § 135.339(a)(6).

Paragraph (e) is added to cover initial and transition flight training for pilot check airmen (aircraft). Paragraph (e) contains requirements equivalent to those contained in current § 135.339(c), but places greater emphasis on the safety issues required during checking that would take place under actual flight.

Paragraph (f) is added to allow all the flight training provisions of paragraph (e) to be accomplished in full or in part in flight, in flight simulators, or in flight training devices as appropriate. This makes the requirements in current § 135.339(c)(1) less burdensome. Current § 135.339(c) allows the initial and transition flight training in safety measures for emergency situations (current paragraph (c)(2)) and the results of improper or untimely safety measures (current paragraph (c)(3)) to be accomplished in an approved flight simulator, but requires the training requirements of (c)(1) to be conducted in flight. In the new rule, the requirements of current (c)(1) are to be codified in § 135.339(e); however, under new paragraph (f), those requirements need not be accomplished in flight. Those requirements can be accomplished in flight, in a flight simulator, or in a flight training device. The FAA believes that this is appropriate because of the proven effectiveness of flight simulator training. Flight training devices also can be used to fulfill the training requirements for the same reasons.

Paragraph (g) is added to establish initial and transition flight training for check airmen (simulator). The requirements include training and practice in the required normal, abnormal, and emergency procedures and training in the operation of flight simulators or flight training devices. Under this paragraph, the training may be conducted in flight training devices or flight simulators as appropriate. The requirements are necessary to establish flight training requirements specifically for check airmen (simulator) who are qualified to conduct flight checks or instruction only in a flight simulator or in a flight training device.

§ 135.340 Initial and Transition Training and Checking Requirements: Flight Instructors (Aircraft) and Flight Instructors (Simulator)

The requirements of this section are identical to the provisions of § 135.339 except that the terms and references apply to flight instructors. The required observation check is an observation check of instructor functions, and paragraph (c)(7) is added to include the current requirement for training in teaching methods and procedures except for the holders of a flight instructor certificate.

PHI

PHI states that it generally supports the proposal to change § 135.339(a)(2) to require an observation check of check airmen functions within the preceding 24 calendar months. However, it requests that a statement be added to the rule language that would further clarify who may conduct this observation check other than an FAA inspector. It suggests that this check should be allowed to be conducted by other "designated check airmen."

PHI also generally supports proposed § 135.340 which requires flight instructors to have the same training as check airmen. It suggests adding language to the rule, however, to enable operators to designate limited instructor capability for the purpose of training specific modules, for example, navigation equipment, air data computers, or other specialized equipment or operations.

FAA Response: The FAA agrees, in part, with PHI's comment regarding clarification of who, other than an FAA inspector, may conduct an observation check. To clarify this matter, the FAA has changed "aircrew designated examiner" to "aircrew designated examiner employed by the operator" under §§ 121.413(a)(2) and 135.339(a)(2). This clarifies that such examiners are associated with a particular operator. The FAA does not recognize the term "designated check airmen" as suggested by the commenter. The FAA does not agree that check airmen should conduct observation checks of other check airmen. The FAA has determined that such authority should be exercised only by FAA inspectors or an FAA designated aircrew examiner employed by the operator.

In reference to PHI's comment regarding proposed § 135.340, this rule was not intended to create limited categories of instructors. To create categories of instructors with limited authority is beyond the scope of the NPRM.

APA

APA's comments are described as follows:

The proposal does not address any experience requirements other than the requirement to hold the appropriate airmen certificates and ratings that are required to serve as PIC for the type aircraft involved. Check airmen under the current regulations are usually operationally experienced line pilots who bring extensive line flying background to the training environment. Under the proposed rule, any individual with the proposed airmen certificates and ratings, with some classroom and simulator training, could be a designated check airman. In today's cost conscious training environment, with extensive use of single visit training cycles, the need to use operationally experienced individuals as check airmen is essential to maintain an effective training environment and operational evaluation standard. Operational experience requirements should include a defined number of PIC hours in the type aircraft and regulatory environment (i.e., part 121 or 135) involved and/or prior qualification as a former military, air carrier, or furloughed pilot.

FAA Response: It is possible that, under this rule, any individual with airmen certificates and ratings, with the appropriate classroom and simulator training, could become a designated check airman. Check airmen (simulator), however, must accomplish the following: Complete the operator's course of instruction (initial, transition, or upgrade, as appropriate) to include the proficiency check using company procedures; regularly participate in an approved line-observation program; maintain recency of experience in the simulator; and accomplish the normal recurring training, line-oriented flight training program, and periodic proficiency checks required of a line-qualified PIC. These requirements are similar to those that line-qualified PIC's must meet. The FAA has determined that certain simulators (Levels C and D) are so advanced that experience gained using these simulators, coupled with the line observation (e.g. § 121.411(f)), recurrency requirements (e.g., § 121.411(c)(2) and (3)), and observation check (e.g., § 121.413(a)(2)) are adequate substitutes for actual flight experience in order to be check airmen. Further, the airman checked by the check airman (simulator) must accomplish operational experience (e.g., § 121.434(c)(1)(i) and (ii)) under the supervision of a fully qualified PIC check airman (airplane) occupying a pilot station. Thus,

are adopted, then similar requirements in appendix H should be deleted.

FAA Response: The FAA has revised the preamble and also proposed §§ 121.411(f), 121.412(f), 135.337(f), and 135.338(f) to clarify that recency of experience requirements can be met either in an airplane or in a simulator (that is, by accomplishing two flight segments or an approved line-observation program). The FAA also has revised all of these sections to clarify the time period in which these flight segments or line-observation programs must be accomplished. For the reasons stated in the FAA's response to APA's comment above, all experience requirements, both initial and recurrent, can be met in an appropriately qualified simulator.

APA also proposes that the new requirement for check airmen and flight instructors to complete an observation check of their performance functions within the preceding 24 months should be increased in frequency to within the preceding 12 months. Flightcrew members are being evaluated at a minimum of at least every 12 months. ALPA echoes APA on this matter. In line with the "one level of safety" concept, according to APA, the rule ultimately adopted should be identical for both part 121 and part 135 operators.

FAA Response: The evaluation timeframe for check airmen and flight instructors will not be less than that required for the individuals they will check or instruct. Check airmen and flight instructors continue to be required to complete appropriate proficiency and competency checks at least once every 12 months. The new requirement that check airmen and flight instructors be observed in the performance of their functions will serve to increase the quality assurance of check airmen and flight instructors.

ALPA

As discussed above, ALPA agrees with APA that the observation checks proposed under §§ 121.413(a)(2) and 121.414(a)(2) should be conducted within 12, rather than 24, months. ALPA and APA further agree that § 121.411(f), as proposed, would require the accomplishment of flying or line observation in a flight simulator. The FAA has responded to these comments above under the discussion of APA's comments.

In addition, ALPA feels that line observation should be required in the airplane on a more frequent basis than proposed. According to ALPA, the requirement in §§ 121.411(f) and 121.412(f) for 12 months should be changed to 3 months. Lastly, ALPA indicates that its comments regarding the proposed part 121 sections are also valid for the proposed part 135 sections.

FAA Response: The FAA agrees that any individual will maintain greater line familiarity with more frequent line observations. Current guidance indicates that two line observations per year are adequate to maintain line familiarity. There is no evidence that safety has been compromised using this current guidance. The FAA believes that annual proficiency or competency checks, and the new 24-month observation requirement coupled with the new annual line observation requirement, exceed the current guidance of two line observations per year.

The FAA acknowledges that ALPA's comments regarding pertinent part 121 sections are intended to apply to parallel part 135 sections and has responded appropriately. As discussed above under APA's comments, the FAA has revised proposed §§ 121.411(f) and 121.412(f) to parallel proposed § 135.337(f).

ATA

ATA suggests that the preamble language of proposed § 121.411(b)(6) be made more clear. As drafted, it is unclear to ATA whether the FAA intends that the check airmen must complete the three takeoffs and landings in an airplane or whether a simulator may be used to satisfy this requirement as allowed under existing § 121.439.

FAA Response: Because check airmen (airplane) are able to perform their functions in an airplane as a required flightcrew member, they may meet recency of experience requirements either in an airplane

a type rating when an instructor is trained on another airplane type;

- Allow sufficient time (i.e., 3 years) for an operator's instructor to obtain a type rating and make it clear that a medical certificate is not required to take a flight test in a simulator; or
- Allow a ''simulator only'' instructor to be issued a type rating upon successful completion of the next recurrent training so that additional training would not have to be provided in preparation for a type rating flight test.

FAA Response: Current § 121.411(b) references simulator instructors. Simulator instructors were individuals who could instruct flightcrew members maintaining airplane qualification but who were unable to instruct those flightcrew members training under an initial, upgrade, or transition training program. These simulator instructors were required to hold an ATP but not a type rating in the type airplane in which they instructed so long as they were only giving proficiency instruction. ATA states that simulator instructors holding an ATP but not a type rating for the airplane in which they instructed could not obtain the required type rating in a level C simulator.

Under this final rule, simulator instructors are included under the category of flight instructors (simulator). Flight instructors (simulator) are required to obtain a type rating for the airplane in which they instruct. Any individual may use an approved simulator to satisfy the practical test requirements for an ATP and associated type rating in accordance with current § 61.157(e). Those individuals who hold an ATP but not the type rating in the airplane in which they provide proficiency instruction will have 9 months to come into compliance with the new requirement by obtaining the aircraft type rating. (See new § 121.412(c)(1)). The new part 121 rule recodifies the existing part 121 requirement that if a simulator instructor is providing initial training, upgrade training, or transitional training, then he or she must have a type rating for the aircraft. Because this is a recodification of the part 121 existing requirement, ongoing compliance is required. In other words, any part 121 flight instructor (simulator) who provides initial, upgrade, or transitional training must continue to have the appropriate type rating for the aircraft involved. In contrast, current § 135.337(b) does not require that a simulator instructor have the appropriate type ratings. Therefore new § 135.338(c)(1) allows flight instructors (simulator) 9 months to come into compliance with the new type rating requirements.

Despite ATA's assertion, in its untimely comment, that it would take two of its members several years to type rate all of their ''simulator only'' instructors, ATA did not provide any data to support its claim (e.g., number of persons affected, availability of simulators, etc.) Furthermore, ATA states in its April 19 comment that these instructors have completed aircraft qualification courses and recurrent training. Thus, the time required for these individuals to obtain type ratings will be minimal.

FedEx and ATA

FedEx and ATA recommend deleting current § 121.411(a)(6) and proposed §§ 121.411(b)(5), 121.412(b)(5), 121.411(e) and 121.412(e). According to these commenters, existing part 61 and § 121.383 adequately address medical certificate and age requirements and the FAA should merely reference these existing requirements in the preamble of this final rule. Regarding §§ 121.411(e) and 121.412(e), the KHAI commenter agrees with ATA and FedEx that these sections should be deleted due to redundancy with existing § 121.383. ATA and FedEx further request that the FAA make it clear that the requirement for a Class III medical certificate in § 61.39 does not apply if the applicant for a type rating uses a flight simulator.

FAA Response: The FAA concurs with ATA that proposed §§ 121.411(b)(5), 121.412(b)(5), 121.411(e) and 121.412(e) may echo provisions contained elsewhere in the regulations; however, the intent of these proposed sections is to clarify medical requirements for the airplane and simulator categories of check airmen and flight instructors.

The provisions of § 61.39, which cover flight tests, do not apply to this rulemaking. The medical requirement provision of § 61.39(a)(3) was adopted to ensure that applicants who would take their flight

is not employed as a pilot for the certificate holder.

FAA Response: The FAA agrees with the commenter to the extent that check airmen and flight instructors who are line qualified flightcrew members for the operator need not duplicate the recordkeeping requirements of § 121.411. This final rule recognizes check airmen and instructors who may not be line qualified and requires such individuals to maintain similar training records as those individuals who are line qualified.

Further, according to KHAI, the observation check requirement in proposed § 121.413(a)(2) is burdensome. Since it is now very difficult to schedule an FAA inspector to conduct checks, KHAI believes that this proposed observation check requirement will add an unnecessary burden of additional tracking and scheduling and accomplishes little in the way of verifying the competency of a check airmen.

FAA Response: The FAA places importance on the role of check airmen and flight instructors. The 24-month observation is a new requirement and will serve to increase the quality assurance of check airmen and flight instructors. This final rule permits qualified aircrew designated examiners employed by the operator to conduct the observation. The addition of aircrew designated examiners employed by the operator to conduct the observation check should relieve any unnecessary burden for tracking and scheduling.

The commenter from KHAI states that there is an apparent discrepancy in the initial and transition training requirements for flight instructors as proposed in § 121.414(c)(7) and for check airmen as proposed in § 121.413(c)(6).

FAA Response: Generally, before an individual becomes a check airman, those individuals are first qualified as flight instructors. The training requirements for flight instructors are prerequisite to the training requirements for check airmen.

KHAI comments that, unlike the new § 121.434 regulation, this regulation does not specifically address line check airmen.

FAA Response: This final rule addresses check airmen as a broad category. Other specific categories of check airmen (i.e., line check airmen, proficiency check airmen, etc.) also were not mentioned. It was not the intent of this rule to address specific categories of check airmen beyond check airmen (airplane) and check airmen (simulator).

Lastly, KHAI states that, in the future, more input is needed from part 121 operators before this type of rule is issued, that comment periods should be longer, and that a review of FAA Order 8400.10 should be conducted.

FAA Response: As indicated in the preamble discussion above, the FAA used draft rule language developed by the Air Carrier Training Working Group of ARAC as the basis for developing this proposal. This working group was comprised of many part 121 operators.

In allotting the 30-day comment period, the FAA was responding to requests for relief from the aviation industry.

Because FAA Orders are guidance material and not regulatory, they are reviewed and updated to coincide with regulatory requirements, when warranted.

Modifications

The following modifications have been made to the final rule:

- "Aircrew designated examiner" has been expanded to "aircrew designated examiner employed by the operator" under proposed §§ 121.413(a)(2) and 135.339(a)(2), to further clarify who, other than an FAA inspector, may conduct an observation check.

to come into compliance with the new requirement for operators to conduct observation checks of check airmen and flight instructors once every 24 months.

- Proposed § 121.412(c)(1) has been revised to give part 121 operators and flight instructors (simulator) who currently only provide proficiency instruction, until March 1997 to obtain a type rating if they do not already have one.
- Proposed § 135.338(c)(1) has been revised to give part 135 operators and flight instructors (simulator) until March 1997 to obtain a type rating for the type, class, or category of aircraft in which they instruct if they do not already have one.

Although not in response to comments, the FAA has also added the word "pilot" in front of "flightcrew members" under proposed paragraphs (e) of §§ 121.411 and 121.412. This clarification is necessary because § 121.383(c) (the so-called "Age 60 rule") only applies to pilot flightcrew members.

With the above modifications being incorporated, this rule is adopted as proposed.

The FAA is making this rule effective on the date of its publication in the *Federal Register* pursuant to 5 U.S.C. §§ 553(d)(1) and 553(d)(3). Because this new rule eliminates certain medical certification requirements, it relieves a restriction that used to exist and thus justifies an immediate change. (See 5 U.S.C. § 553(d)(1)). Because much of the rest of these rules are merely a recodification of long-standing rules, good cause exists for making this recodification effective immediately. (See 5 U.S.C. § 553(d)(3)). Although these rules are effective immediately, the FAA is allowing operators and other affected individuals 9 months to come into compliance with two new requirements: the 24-month observation check and the type rating requirements. (See earlier discussion.)

Paperwork Reduction Act

As stated in the NPRM, the paperwork burden associated with this rule is negligible. The FAA estimated the average burden hour per respondent at 15 seconds per individual every 2 years. As discussed above under "Effective Date," OMB is reviewing the information collection requirements associated with this rule and will publish a notice informing the public when these information requirements become effective.

International Civil Aviation Organization and Joint Aviation Regulations

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to comply with ICAO Standards and Recommended Practices to the maximum extent practicable. The FAA is not aware of any differences that this rule presents, nor were any differences indicated in any of the comments received.

Regulatory Evaluation Summary

Changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs Federal agencies to promulgate new regulations or modify existing regulations only if the potential benefits to society outweigh the potential costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic impact of regulatory changes on small entities. Finally, the Office of Management and Budget directs agencies to assess the effects of regulatory changes on international trade. In conducting these analyses, the FAA has determined that this rule is not "a significant regulatory action" as defined in the Executive Order and the Department of Transportation Regulatory Policies and Procedures. This rule will not have a significant impact on a substantial number of small entities and will have no impact on international trade. These analyses, available in the docket, are summarized below.

In addition, check airmen and flight instructors that conduct Line-Oriented Flight Training and Line Operational Evaluation in simulators had to be line qualified or line familiar and had to participate in a line observation program. This line observation program has the same requirements as the one that is being adopted for check airmen (simulators) and flight instructors (simulator). Therefore, this program will not impose any additional burden on the aviation industry.

In addition, current FAA policy, as part of Flight Standards Work Program Functions, requires aviation safety inspectors to observe, at least once annually, half of the check airmen and instructors while they perform their duties. A portion of the current observation practice and policy is incorporated into the Code of Federal Regulations by this rulemaking. Since the above policy and practice exceed the requirements, this rulemaking will not impose any additional burden on the airline industry.

The rule affords cost savings to air carriers by allowing them to hire experienced pilots who are not able to hold a current medical certificate to check or instruct in flight simulators and flight training devices if they satisfy the above requirements. These pilots, many of whom are retired, would probably offer their services at lower cost to the airlines than the full-time pilots that currently are performing these functions. Air carriers also will be able to reduce disruption to their operations by contracting with part-time pilots to provide training and checking services, thereby eliminating the need to pull line pilots from their routine duties. The rule also will reduce costs to the industry because it allows all initial and transition flight training for check airmen and instructors to be conducted in simulators or in flight training devices as opposed to the current in-flight requirement. Accordingly, the FAA finds this rule to be cost-beneficial because it does not impose any additional costs on the aviation industry and allows for less costly training of future pilots.

Regulatory Flexibility Determination

The Regulatory Flexibility Act (RFA) of 1980 was enacted by Congress to ensure that small entities are not unnecessarily or disproportionately burdened by Government regulations. The RFA requires a Regulatory Flexibility Analysis if a rule is expected to have a "significant (positive or negative) economic impact on a substantial number of small entities." Based on the standards and thresholds specified in implementing the FAA Order 2100.14A, Regulatory Flexibility Criteria and Guidance, the FAA has determined that the rule will not have a significant impact on a substantial number of small entities.

International Trade Impact Assessment

This rule is expected to have neither an adverse impact on the trade opportunities for U.S. firms doing business abroad nor on foreign firms doing business in the United States. The cost savings that would be realized from the rule are not likely to be significant enough to affect the competitive position of domestic concerns vis-a-vis foreign concerns.

Conclusion

For the reasons discussed in the preamble, and based on the findings in the Regulatory Flexibility Determination and the International Trade Impact Analysis, the FAA has determined that this regulation is not significant under Executive Order 12866. In addition, it is certified that this rule will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. This rule is not considered significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979).

The Amendment

In consideration of the foregoing, the Federal Aviation Administration amends 14 CFR parts 121 and 135 effective June 17, 1996.

The authority citation for part 121 continues to read as follows:

SUMMARY: This final rule: Updates the terminology used to describe simulators; eliminates the requirement that the minimum of 1 year of employment as an instructor or check airman be with the operator of the simulator; and authorizes the use of Level C simulators for initial and upgrade training and checking for second-in-command (SIC) duties. This action responds to concerns identified by certain affected certificate holders in petitions for exemption. It is intended to alleviate unnecessary training costs while maintaining an equivalent level of safety.

FOR FURTHER INFORMATION CONTACT: Gary E. Davis, Project Development Branch (AFS–240), Air Transportation Division, Office of Flight Standards, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267–3747.

SUPPLEMENTARY INFORMATION:

Availability of Final Rules

Any person may obtain a copy of this final rule by submitting a request to the Federal Aviation Administration, Office of Rulemaking (ARM–1), 800 Independence Avenue, SW., Washington, DC 20591, or by calling (202) 267–9677. Communications must identify the notice number of this final rule.

Persons interested in being placed on the mailing list for future rules should request from the above office a copy of Advisory Circular No. 11–2A which describes the application procedure.

Background

Appendix H to Title 14 Code of Federal Regulations (CFR) part 121, "Advanced Simulation Plan," provides guidelines and a means for achieving flightcrew training and checking in advanced airplane simulators. The three-phase plan provides standards for a progressive upgrade of airplane simulators so that the total scope of flightcrew training can be enhanced.

Appendix H specifically describes the simulator and visual system requirements that must be met to obtain approval to conduct certain training and checking in the particular type of simulator (Phase I, II, or III).

Appendix H was developed and adopted when there were no "advanced simulators." Currently, however, advanced simulators exist which have permitted virtual duplication of many aircraft performance characteristics and systems. As a result, the vast majority of U.S. airline pilot training is now conducted in these advanced simulators. According to industry members, however, certain limitations originally incorporated into appendix H still require a small, yet relatively expensive, amount of training to be completed in the actual airplane.

In light of their highly satisfactory experience with these simulators, some industry members believe that Level C simulators should be approved for those flightcrew training and checking maneuvers that currently are permitted only in the aircraft or in Level D simulators. (The differences between Level C and Level D simulators are discussed in more detail below.) In a petition for exemption dated October 12, 1992, the Air Transport Association, on behalf of its affected member airlines and other similarly situated airlines, petitioned for an exemption to provide for initial training in a Level C simulator. Trans World Airlines and Tower Airlines petitioned individually to use a Level C simulator to conduct limited initial and upgrade training and checking functions that would normally be conducted in a Level D simulator. Agreeing in part with the petitioners' supportive information and, based on its own experience, the FAA granted some limited relief for training and checking.

More recently, United Airlines (United) has requested similar but slightly more extensive relief than previously granted. United believes that its experience with advanced simulation, as well as the FAA's own experience, more than adequately justifies expanding the scope of flightcrew training and checking

the supportive information, the FAA believes that United is not alone or unique in its request. Therefore, the FAA has determined that the appropriate response to the United petition for exemption is to change the existing regulations. On February 14, 1995, the FAA published a Notice of Proposed Rulemaking (NPRM) (60 FR 8490) in which it proposed to revise and clarify certain requirements of part 121, appendix H. The FAA received nine comments on its proposal. The commenters included the Air Transport Association (ATA), Simuflite, the Regional Airline Association (RAA), the Airline Pilots Association (ALPA), the Federal Express Corporation (FedEx), United, Atlantic Southeast Airlines, Inc. (ASA), American Airlines (American), and an individual whose affiliation was not revealed. ALPA and the individual were the only commenters who were not generally supportive of the proposal and made several recommendations. Other commenters expressed general support with minor modifications. All comments are discussed below under "Discussion of the Final Rule."

Discussion of the Final Rule

Terminology

Simulators historically have been referred to in terms of "phases" because it was expected that operators would be upgrading their simulator inventories in phases while exercising simulator privileges commensurate with the phase of the simulator. The upgrading of simulators in phases is now essentially complete and the designation of "phase" for identification of simulator complexity is no longer descriptive. Operators no longer begin at a lower level of qualification and upgrade in phases. The tendency is to acquire a given level simulator that best meets their needs. The agency and the industry now commonly refer to simulators in terms of "levels." The FAA received two comments, from Simulflite and United, on this proposal to modify existing appendix H terminology. Both commenters supported the FAA's proposal to replace the term "phase" with the term "level."

This rule, therefore, revises appendix H, as discussed below, to replace the old terminology with the new throughout the appendix. The new terminology will be used throughout this preamble in discussing other amendments to this rule.

The levels currently used to describe a particular simulator compared with the older phase designations are:

New terminology	Old terminology
Level A	Visual
Level B	Phase I
Level C	Phase II
Level D	Phase III

Authorizing Additional Training and Checking in a Level C Simulator

All simulators duplicate or simulate the functions of an airplane to varying levels of accuracy. The FAA currently requires that, for each higher level of simulator, the simulator duplicate the performance of the airplane over larger and more critical portions of the airplane's operating envelope. This performance must be shown by documented evidence. Level D simulators must provide the highest level of flight realism. They must perform as the airplane performs over the largest portion of the airplane's operating envelope, while providing the most complete and technically accurate environment possible. Evidence of this performance must include certain sophisticated aerodynamic modeling that allows more complete replication of the performance of the airplane.

Level C simulators are designed to operate over the same portion of the airplane's operating envelope as Level D simulators, and do so under a relatively sophisticated performance verification process. Level C simulators, however, are not required to have sophisticated aerodynamic modeling factors. Nor do they undergo the degree of performance verification that Level D simulators do.

no difference in flight dynamic performance between Level C and D simulators. Level C can be treated as Level D for all training and checking functions.

FedEx: The only perceptible difference between a Level C and D simulator is that a Level D simulator has a daylight visual system. A Level C simulator is capable of providing the same quality of training as a Level D simulator. The pilot must pass the same flight test standards on all required maneuvers in either Level C or Level D simulators. A 1984 study concluded that a simulator, less sophisticated than a Level C simulator, will support a large majority of the events needed for ATP certification. Moreover, this study also concluded that for an ATP or type rating for students with a commercial rating (1,500 hours of flight) no requirement exists for a daylight visual system.

United: The continued efforts to justify uses for a Level D simulator are simply not supported by airline training experience. Level C simulators are completely adequate for all training and checking. Level D simulators cost more to buy and maintain. The aerodynamic models and performance of Level C and D simulators are identical. The real differences between Level C and Level D simulators are the availability of daylight visual scenes, some special effects, and objective tuning of sound and motion cues.

ASA: A Level C simulator should be allowed for full training and checking for initial SIC. The FAA also should allow partial credit for Level B under appendix H. The only significant difference is the visual system, which, except for circle-to-land maneuvers is not a factor. Level 5, 6, and 7 Flight Training Devices should be allowed credit under appendix H. This would allow a combination of flight training devices and Level B or C training.

American: A Level D simulator has an extremely limited training value advantage over a Level C simulator. With the recent technological advances in visual systems, a Level C simulator could be more valuable from a training perspective than some Level D simulators. The Level C simulator with the wide visual system is superior to the Level D simulator with the conventional monitor optics display in meeting training objectives.

ALPA: If a Level C simulator can be substituted for a Level D simulator, then how is training enhanced and safety maintained? Level D simulators provide airframe icing effects and realistic airport lighting. They also provide airframe buffet and visual scenes such as landing illusions, overwater approaches, and rising terrain on the approach path.

Individual: Simulators are not all that they should be—visual cues, inflight dynamics, landing maneuvers, and total environment experiences have yet to be fully developed with current simulator technology.

FAA Response: The discussion of the differences between Level C and Level D simulator programs includes consideration for the performance standards of each and how each level of qualification may be applied to training and checking. Application of a specific qualification level depends in turn on student experience levels and the overall curriculum. The FAA still believes, as industry did when appendix H was implemented, that lower experience levels require more accurate flight dynamic simulation and training in a wide variety of special effects such as weather and runway contaminants. The Level D simulator performance standards exceed Level C in special effects to include daylight visual scenes and more accurate testing for flight dynamics, motion, and sound. It has always been FAA's intent that the special effects required of each qualification level be used in the curriculum for initial and upgrade pilot qualification.

The FAA understands ALPA's concern that the special effects (to include daylight visual scenes) required of Level D simulators currently are not being exercised in contemporary training programs as originally intended. These effects are one of the key elements required for the different experience levels acceptable for use in Levels C and D.

One commenter, ASA, suggested that appendix H should "allow partial credit for Level B," and that "Levels 5, 6, and 7 Flight Training Devices should be credited under appendix H." The FAA

The FAA believes that further studies are needed to explore the entire issue of "out-of-the-window" visual cue requirements relative to the current and projected state of the art. A research requirement for this study has been established. Industry participation is planned and judged essential to the success of this research.

The FAA agrees with the commenters who have indicated that the aerodynamic performance of Level D has been generally accepted as the industry standard for all advanced simulators including Level C. Therefore, the FAA accepts that the aerodynamic performance of some (late model) Level C simulators may be identical to Level D simulators. Level C simulators that meet Level D aerodynamic performance standards provide training benefits in some areas equal to Level D simulators. However, the use of Level D aerodynamics is not required of Level C, and Level C simulators are not tested and qualified to Level D aerodynamic standards.

Given 13 years of experience using Level C simulators, and the rigorous qualification process and performance standards required for Level C simulators, the FAA adopts its proposal to allow Level C simulators to be used for initial qualification and upgrade training and checking for SIC.

Prior Aeronautical Experience

The FAA proposed to add a new paragraph 4 to the proposed section entitled "Level C, Training and Checking Permitted." Under this proposal, the FAA would permit SIC applicants to obtain initial and upgrade training and certification checks in Level C simulators if certain preconditions are met. This new paragraph, as proposed, would require that the applicant meet the prior aeronautical experience requirements for an ATP certificate and airplane rating under § 61.155, before beginning training in a Level C simulator and before being checked under § 61.157 in a Level C simulator for an ATP certificate or rating.

Simuflite expressed uncertainty regarding the lack of any requirement for recency of experience and no restrictions on prerequisite experience for SIC applicants who meet the aeronautical experience requirements of § 61.155 in "the" airplane. According to Simuflite, the proposal should have stipulated that the applicants possess the experience requirements of § 61.155 in "an" airplane of equivalent class. As for the proposed revisions to the operating experience provisions, Simuflite agreed that operating experience should be acquired performing the duties of the respective crew position under the supervision of a check pilot and regardless of whether the training was done in a Level C or D simulator. However, according to Simuflite, the provision to make operating experience requirements more stringent for the SIC who received training in a Level C infers that there is some belief that the training may be insufficient and inferior.

In regard to § 121.434(f), RAA recommended that the FAA eliminate from the final rule the proposed restriction which would not permit SIC pilots trained in a Level C simulator to reduce the hours of initial operating experience by up to 50 percent by the substitution of one additional takeoff and landing for each hour of flight.

FedEx stated that it could only agree that SIC's should have to meet the flight experience requirements of § 61.155, if qualifying in a Level C simulator, if an ATP certificate is involved. If the FAA is going to require SIC's to meet the requirements of § 61.155, then it should require all pilots qualifying as SIC's to meet those requirements, regardless of the method used to qualify the individual. According to FedEx, there probably are not many part 121 SIC's who do not meet the requirements of § 61.155. Further, FedEx did not agree that § 121.434(c)(2) should be tied to all pilots trained in a Level C simulator. For FedEx, if a SIC needs supervised operating experience, then it should be made applicable to all SIC's, regardless of how they were qualified.

United supported a requirement for SIC operating experience to be gained in the SIC duty position, supervised by a check pilot. However, United did not support the proposed requirement that the operating experience consist of at least four takeoffs and four landings as the sole manipulator of the controls.

certificate or rating under § 61.157." Like United, American concurred with ATA's suggested rewording of § 121.434(c)(2)(ii)(B).

FAA Response: Regarding amendments to § 121.434, the FAA agrees with the commenters and has determined that these proposed amendments need not be retained. The FAA, in its deliberations and review of comments, agrees with United which pointed out that the questions on whether or not to amend § 121.434(f) was contradictory to an earlier FAA proposal. Some commenters also stated that the proposal to require four takeoffs and four landings for the SIC as sole manipulator of the controls was excessive and did not address pilot-not-flying duties. The FAA has decided that the changes made to § 121.434 in the final rule entitled "Pilot Operating and Experience Requirements" (60 FR 20858; April 27, 1995) satisfies these issues raised by commenters and adequately addresses the safety concerns of the FAA. Therefore, the FAA will not propose additional amendment to § 121.434.

Regarding the proposed change to require a SIC to meet the flight experience requirements of § 61.155, the FAA has determined that Level D simulators, used in an approved appendix H training program that may use the prescribed special effects for the 250-hour commercial, instrument-rated pilot, constitute the minimum acceptable level for initial and upgrade SIC qualification in part 121 today. Using a Level C simulator for training the 1500-hour ATP applicant is equal to or better than using a Level D simulator for training the 250-hour commercial, instrument-rated pilot. The FAA believes that experience requirements are a vital part of qualification, as well as any required certification within qualification. Therefore, it is appropriate to require § 61.155 experience for SIC qualification and training and paragraph 4 under proposed "Level C, Training and Checking Permitted" is adopted as proposed.

Modifying Employment Requirement

This final rule will remove the requirement in appendix H (in paragraph 3 of the section entitled "Advanced Simulation Training Program") that each instructor and check airman have been employed for at least 1 year by the certificate holder applying for approval of the program. The FAA's intention, in originally requiring a minimum period of 1-year of employment with the operator, was to ensure suitable experience levels for individuals selected to be instructors and check airmen. The most sophisticated simulator can be of little value without an experienced, well-trained instructor or check airman to operate it. However, the agency has concluded that this goal can be achieved by 1 year of experience serving as an instructor or check airman with any part 121 operator. The FAA believes that this amount of instructor experience, in addition to the training prerequisites for these individuals in appendix H, is an adequate level of preparation for an instructor or check airman in a Level C simulator. Modifying the employment requirement in this way will not decrease safety. However, it should be noted that, instructors and check airmen may participate in more than one operator's approved training program; each operator must provide training for each instructor and check airman in its training program. Thus, an instructor or check airman who instructs for more than one operator must receive training in each operator's program.

Similarly, the FAA proposed to revise the section entitled "Phase II, Training and Checking Permitted" in appendix H to provide that pilots seeking to upgrade to pilot in command (PIC) do not have to have obtained the prerequisite SIC experience "with the operator," nor have served or be serving as SIC "with that operator." Again, the FAA believes that the level of experience required by an approved training program, in addition to the training prerequisites for these individuals in appendix H and elsewhere under the Federal Aviation Regulations, establishes an adequate level of preparation regardless of employment with any specific operator.

Commenters generally supported the FAA's proposal to remove certain employment restrictions. However, ATA suggested deleting paragraph 3 of the Advanced Simulation Plan entirely or, if not possible, modifying paragraph 3 to make clear that anyone who has 1 year of experience—namely with the military, a manufacturer, or a foreign airline—is qualified.

already been offered through exemptions issued to United and to ATA. It also supported the FAA's proposal to delete the words ''with the operator'' for PIC initial or upgrade training, under existing paragraphs 2(a)(ii) and (iii) of ''Phase II Training and Checking Permitted.''

United concurred with other commenters that equivalent military experience should be allowed.

ASA indicated that appendix H should allow established operators to introduce new aircraft with instructors currently employed without waiting 1 year to gain in-type experience.

American echoed the exemption experience mentioned by United and further stated that this experience has proven that training received by a pilot who has already served as SIC on a large jet aircraft provides an equivalent transfer of learning.

ALPA was opposed to the proposal indicating that it only addresses the issue of airplane knowledge and qualification but not familiarity with company policies and operating procedures.

FAA Response: The FAA has carefully reviewed commenters' opinions concerning its proposal to amend the 1-year employment requirement for instructors and check airmen in part 121, appendix H and in certain exemptions. The commenters generally concurred that safety considerations should not be based on employment status but rather on prior in-flight experience in the group of airplanes in which the pilot is instructing or checking. By amending the employment provisions of appendix H, the FAA's intent is to honor all experience gained as an instructor or evaluator in group. This would include experience under part 121, part 135, corporate, and military operations.

Further, in response to United's comment, the FAA adopts its proposal to delete the words ''by the certificate holder'' from paragraph 3 of ''Advanced Simulation Training Program'' and to delete the words ''with the operator'' from paragraphs 2(a)(ii) and (iii) of ''Phase II Training and Checking Permitted.''

The FAA understands ALPA's concern that instructors and check airmen should be familiar with ''company policies and operating procedures.'' However, as previously stated, the FAA believes that the student entry level of experience required by an approved training program, in addition to the training prerequisites for these individuals in appendix H, and elsewhere under part 121, establishes an adequate level of preparation.

Clarifying Training and Certification Check Requirements for Initial and Upgrading Training for SIC's Upgrading to PIC

Under the proposed section entitled ''Level C, Training and Checking Permitted,'' the FAA proposed to redesignate paragraph 2(a) as paragraph 2 and paragraph 2(b) as paragraph 3 to clearly distinguish between the prerequisites for initial versus upgrade training and checking. This paragraph restructuring was proposed in order to eliminate the need for the flush paragraph currently at the end of the section.

Current paragraph 2(a) sets forth the prerequisites for training and checking in a Level C simulator for SIC's upgrading to PIC in the same equipment. For example, a pilot serving as SIC in a Boeing 727 upgrading to PIC in the same airplane would have to meet the requirements of this paragraph. Under new paragraph 2, as proposed, these requirements would not change. The pilot would still have to have previously qualified as SIC in the equipment, be currently serving as SIC in an airplane in the same group, and have at least 500 hours of actual flight time as SIC in an airplane in the same group. These requirements are consistent with the definition of upgrade training under Subpart N—Training Program. Section 121.400(c)(3) defines ''upgrade training'' as the training required for crewmembers who have qualified and served as SIC or flight engineer on a particular airplane type, before they serve as PIC or SIC, respectively, on that airplane.

The requirements of current paragraph 2(b) must be read in conjunction with the final paragraph in the section to determine that it applies to initial training and checking for SIC's upgrading to PIC in an airplane type in which the pilot has never served as SIC. This SIC has experience in the same

may upgrade to another airplane in that group in which that pilot has not previously qualified. requirements in new paragraph 3 continue to be consistent with § 121.400(c)(1), which defines "initial training" as the training required for crewmembers and dispatchers who have not qualified and served in the same capacity on another airplane of the same group.

The FAA received two comments on its proposed clarifications to initial and upgrade training requirements for SICs under paragraphs (2) and (3) of the section entitled "Level C, Training and Checking Permitted." (Comments received on current flight-hour requirements are discussed below under "Modifying Current Flight-Hour Requirements.")

ATA requested that paragraph 2(c) be reworded as follows: "Is currently serving as second in command in an airplane in the same group as the type airplane to which the pilot is upgrading." It further requested that proposed paragraph 3(c), which would require a pilot to have served as SIC on at least two airplanes of the same group, be deleted.

American concurred with ATA's requested modification of paragraph 2(c) and ATA's suggestion to delete proposed paragraph 3(c). American further proposed, however, adding a new paragraph 5 to address PIC's seeking an additional type rating on an ATP within the same group without meeting flying time experience requirements.

FAA Response: The FAA does not agree that removing the requirement in proposed paragraph 3(c) for a PIC initial applicant to have "served as SIC on at least two airplanes of the same group" will yield an adequate level of safety. Removing this paragraph would allow a SIC flying hour credits outside of part 121 operations.

American's comment that additional language be added to allow PIC's to seek an additional type rating on an ATP within the same group without meeting flying time experience requirements may have merit. Although it would be beyond the scope of the proposal to add a new paragraph 5, as American proposes, the FAA believes that the new PIC upgrade language as adopted in paragraph 2 responds directly to this concern.

Modifying Current Minimum Flight-Hour Experience Requirements

In crafting its proposal, the FAA contemplated whether to propose revising certain flight-hour experience requirements for initial and upgrade training and checking in a Level C simulator. Currently, pilots upgrading from SIC to PIC in equipment in which they have previously qualified as SIC are required to have at least 500 hours of actual flight time while serving as SIC in an airplane in the same group. Similarly, pilots who are initially upgrading from SIC to PIC in other equipment in which the pilot has not been previously qualified, must have a minimum of 2500 hours as SIC in airplanes of the same group as the equipment to which they are upgrading.

The flight hour experience requirements ensure that a pilot has adequate experience in order to upgrade to PIC. These values were established, based on the collective opinions of the FAA and industry members, when appendix H was originally adopted. Since then, industry members have argued that the required hours are excessive. Based on the success of some industry members who have operated under exemptions that provided certain relief of these flight-hour requirements and other specific requirements for upgrade training under subpart N, the FAA indicated in the NPRM preamble that it may propose, at some future date, to eliminate the 500 flight-hour requirement and reduce from 2500 to 500 the number of flight hours required for initial upgrade training and checking.

In its preamble, the FAA requested comments and additional information that may justify proposing to modify these current flight hour requirements in a future rulemaking. These comments are discussed below.

ATA proposed that the FAA eliminate the requirement for a SIC to have 500 flight hours in an airplane in the same group and reduce from 2500 to 500 the number of flight hours required for initial upgrade training and checking. ATA recommended that the 500-hour requirement apply to any pilot

with the operator as a SIC. Further this exemption allows the initial PIC candidate, not previously qualified in the equipment, to possess only 500 hours flying time with the operator as a SIC instead of 2500 hours in two different airplanes of the same group.

ALPA did not agree with the current regulations that allow a pilot to receive initial training exclusively in a Level D simulator without experience prerequisites. According to ALPA, with the possibility of low-time pilots and ab initio candidates being placed in large aircraft in the near future, training needs to be enhanced, and not reduced in quality.

FAA Response: The FAA appreciates the invited comments on reducing current minimum flight-hour requirements.

Standardizing Language and Eliminating Obsolete References

As discussed above, the term "phase" is no longer used to describe the various simulators referred to in appendix H. Accordingly, the FAA proposed to replace "phase" with "level" wherever it appears and to use the current alphabetical designations for the various levels.

In addition, the FAA proposed to remove the section entitled "Phase IIA Interim Simulator Upgrade Plan for part 121 Operators" as obsolete. For the same reason, it proposed to remove paragraph 7 of the section entitled "Advanced Simulation Training Program" which references Phase IIA. Under Phase IIA, any part 121 operator could conduct Phase II training for 3 and ½ years from the date it was approved for Phase I in a simulator approved for the landing maneuver under Phase I. The carrier's upgrade plan had to be submitted to the FAA before July 30, 1981. Thus, these provisions are no longer effective.

United supported changing the terminology and also deleting all reference to "Phase IIA." According to United, these changes certainly are appropriate and are supported.

The proposed removal of the obsolete sections is adopted as proposed.

Additional Comments

The FAA received some comments that are general in nature and that do not specifically reference the proposed amendments.

For example, United proposed deleting the word "Plan" from the title of appendix H since it is no longer, and has not been for many years, a plan.

Simuflite recommended that it would seem reasonable to place simulator and training device requirements in a separate regulatory structure, since it is clear that all segments of the aviation training industry may exercise the permitted simulation training and checking. Simulator standards should stand alone in a rule addressing the use of simulation equipment as appropriate to operations conducted under those rules. The proposed changes should be expanded to clarify that the same training and checking authority in Level C simulators be extended to those part 135 operators who will not be required to comply with subparts N and O of part 121.

ALPA would like to see an additional simulator category, perhaps Level E, which would be a Level D with all aircraft devices such as Traffic Collision Avoidance System, weather radar, Global Positioning Warning System, terrain presentations, and more realistic air traffic control communications. This would add an additional level of reality to pilot training.

FAA Response: The FAA appreciates all of above comments and believes that they may have merit. In particular, the FAA agrees that there is room for upgrading simulation standards to include special equipment operations such as weather radar and TCAS (integrated where appropriate), and realistic air-to-ground communications (ATC, Weather, Company, etc.). These comments cannot be incorporated into

Regulatory Analysis

Executive Order 12866 established the requirement that, within the extent permitted by law, a Federal regulatory action may be undertaken only if the potential benefits to society for the regulation outweigh the potential costs to society. In response to this requirement, and in accordance with Department of Transportation policies and procedures, the FAA has estimated the anticipated benefits and costs of this rulemaking action.

The FAA has determined that this rule is not a "significant rulemaking action", as defined by Executive Order 12866 (Regulatory Planning and Review). The anticipated costs and benefits associated with this rule are summarized below. (A more detailed discussion of costs and benefits is contained in the full regulatory evaluation placed in the docket for this rule.)

Costs

The rule does not impose any additional costs on either part 121 air carrier operators or the flying public. The rule allows certain training practices that the FAA has determined to be safe and efficient methods for training pilots, and it clarifies other portions of appendix H. Thus, the rule does not impose any additional costs because it permits operators to use the least costly methods of training while maintaining an equivalent level of safety for the flying public. Since current training practices could be maintained to current standards under the rule, there is no reduction in aviation safety imposed on the flying public.

Potential Cost-Relief Benefits

The rule generates potential cost savings benefits estimated at $21.6 million, in 1992 dollars, over the next 10 years (or $13.3 million, discounted, using a 7.0 percent rate of interest). These potential cost savings benefits take the form of increased operational efficiency (qualitative) and cost savings (quantitative) to those part 121 operators engaged in initial simulator training, in accordance with appendix H.

The potential cost savings benefits of the rule represent the difference between the costs incurred currently by part 121 air carriers for initial training and checking of SIC pilots and the costs that incurred from the proposal becoming a rule. Currently, certain requirements for initial training and checking of SIC pilots that are not performed in a Level D simulator must be performed in the aircraft. Under the rule, those requirements that are performed in the aircraft in lieu of a Level D simulator can be performed in a Level C simulator. The costs of operating the aircraft for those requirements above the costs of operating the less expensive simulator for those same requirements is the estimated benefit of this rule.

In an effort to derive a cost-relief estimate associated with this rule, several part 121 air carriers were contacted. These air carriers provided the agency with estimated aircraft operating costs per hour, the time needed to train and check pilots for those requirements that, under the present rule, cannot be performed in a Level C simulator, and the number of pilots that it expects to train in the next 10 years.

Potential Operational Efficiency Benefits

The potential benefits of the rule would be generated in the form of increased operational efficiency. In the full regulatory evaluation placed in the docket, these potential efficiency benefits are presented qualitatively. These benefits are difficult to estimate quantitatively due, at present, to the lack of available cost information.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress to ensure that small entities are not unnecessarily and disproportionately burdened by government regulations. The RFA requires govern-

summary, the rule would not impose any costs on these operators because it is cost-relieving in nature. Therefore, the rule would not impose a significant economic impact on a substantial number of small aircraft operators.

International Trade Impact Assessment

The rule would have little, if any, impact on the competitive posture of either U.S. carriers doing business in foreign countries or foreign carriers doing business in the United States. This assessment is based on the fact that the rule would not impose any cost on part 121 operators because it is cost-relieving in nature. These operators do not compete directly with air carriers engaged in foreign operations (part 129).

Federalism Implications

The regulations contained herein would not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12866, it is determined that this rule would not have federalism implications requiring the preparation of a Federalism Assessment.

International Civil Aviation Organization and Joint Aviation Regulations

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to comply with ICAO Standards and Recommended Practices (SARP) to the maximum extent practicable. The FAA is not aware of, and did not receive any comments indicating any differences that this rule will present.

Paperwork Reduction Act

This rule contains no information collection requests requiring approval of the Office of Management and Budget pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)).

Conclusion

For the reasons discussed in the preamble, and based on the findings in the Regulatory Flexibility Determination and the International Trade Impact Analysis, the FAA has determined that this regulation is not significant under Executive Order 12866. In addition, it is certified that this rule will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. This rule is not considered significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979).

The Rule

In consideration of the foregoing, the Federal Aviation Administration amends 14 CFR part 121 effective June 17, 1996.

The authority citation for part 121 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 40119, 44101, 44701–44702, 44705, 44709–44711, 44713, 44716–44717, 44722, 44901, 44903–44904, 44912, 46105.

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testing, and checking. This rule will increase the use of flight simulators and flight training devices by permitting their use for most airman certification training, testing, and checking tasks. This use of simulation for training, testing, and checking is more liberal than that currently permitted under the Federal Aviation Regulations. The training center concept will provide a common source for standardized, quality training accessible to any individual or corporate operator and air carriers. This action is consistent with a state-of-the-art training concept and recognizes industry recommendations for the expanded use of sophisticated flight simulation. The new rule also adds regulations regarding Category III instrument landing system operations.

FOR FURTHER INFORMATION CONTACT: Warren Robbins, Airman Certification Branch (AFS–840), General Aviation and Commercial Division, Flight Standards Service, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 267–8196.

SUPPLEMENTARY INFORMATION:

Availability of Final Rules

Any person may obtain a copy of this final rule by submitting a request to the Federal Aviation Administration, Office of Rulemaking (ARM–1), 800 Independence Avenue, SW., Washington, DC 20591, or by calling (202) 267–9677. Communications must identify the notice number of this final rule.

Persons interested in being placed on the mailing list for future rules should request from the above office a copy of Advisory Circular No. 11–2A which describes the application procedure.

Background

Flight simulation technology has shown enormous advancement during the past 30 years. The Federal Aviation Administration (FAA) has permitted greater use of aircraft flight simulators and flight training devices in training, testing, and checking airmen. The increased complexity and operating costs of the modern turbine-powered aircraft and the current operating environment have created an even greater need for the use of flight simulators and flight training devices. In many cases, flight simulators have proven to provide more in-depth training than can be accomplished in the aircraft. The use of flight simulators and flight training devices in lieu of aircraft has resulted in a reduction in air traffic congestion, noise and air pollution, and training costs. The increased use of flight simulators is also consistent with the national policy for fuel conservation.

Flight simulators provide a safe flight training environment. They may reduce the number of training accidents by allowing training for emergency situations, such as fire, total loss of thrust, and systems failures, that cannot be safely conducted in flight. The FAA has traditionally recognized the value of flight simulation and has awarded credit for the completion of certain required training, testing, and checking by use of simulation.

The first aircraft flight simulators approved by the FAA were relatively unsophisticated and were authorized for only a limited number of maneuvers and procedures. As flight simulator technology developed, the FAA expanded the use of flight simulators but still required students to perform a number of maneuvers in an aircraft. Among these were takeoffs, landings, taxiing, and some approaches.

In Amendment No. 121–55 (35 FR 84; January 3, 1970), the FAA revised parts 61 and 121 to authorize the use of flight simulators and flight training devices for airman training, testing, and checking. This use applied only to part 121 air carriers.

In Amendment No. 61–60 (38 FR 3156; February 1, 1973), the FAA authorized the § 61.58 proficiency check for the pilot of an aircraft requiring more than one pilot to be accomplished in its entirety either in an airplane or in a flight simulator or flight training device. In alternating 12-month periods, the proficiency check consists of maneuvers and procedures that may be performed in a flight simulator or flight training device as set forth in appendix F of part 121.

Since the infancy of simulation training, the training roles of several elements of the aviation community have expanded, most notably those of part 121 and part 135 certificate holders providing training for other certificate holders. Also, aircraft manufacturers are providing more simulation training now than they did in the past. This expansion has led to an ever-increasing need to issue exemptions.

In June 1988, the FAA received from a joint industry/FAA task force[1] several recommendations on the expanded use of flight simulators in new and innovative training programs. The recommendations included (1) Establishing a training center certificate for a separate training entity certificated to conduct training, testing, and checking under 14 Code of Federal Aviation Regulations parts 61, 63, 91, 121, 125, 135, and 141; (2) centralizing an approval process for course programs and check airmen at the national level, with local approvals only for specialty (local or unique) courses; and (3) expanding and standardizing the use of flight simulators and flight training devices, while at the same time providing relief from certain provisions of part 121, appendix H. The task force recommended single point oversight of a certificate by the FAA (instead of separate Flight Standards District Offices (FSDO's) approving centers in their geographic areas), defining training center recordkeeping requirements, and providing relief from the medical certificate requirements for instructors and check airmen conducting training in only flight simulators and flight training devices. The task force submitted aircraft manufacturer recommendations as an addendum recommending that a manufacturer's training center provide the initial operating experience (IOE) for air carriers.

In April 1989, this task force examined the role of training centers that provide training, testing, and checking for air carrier and general aviation pursuant to contracts, particularly training using flight simulators and flight training devices. This task force, which was comprised of aviation representatives from special interest groups, aircraft manufacturers, air carriers, university flight departments, and training centers such as SimuFlite, FlightSafety International, and Northwest Aerospace Training Corporation, examined flight simulation instructor and evaluator issues, including prerequisites; initial and recurrent training; requirements for current medical certificates; necessary in-flight experience; training center issues such as recordkeeping, facilities, and equipment; and the training program approval process.

The formal recommendations of this task force were forwarded to the FAA in October 1989. Essentially, the task force recommended that the FAA standardize the use of flight simulators and flight training devices, provide a means to certificate entities called training centers, and permit the training centers to apply for national approval of core curriculums that could be used by individuals receiving training under parts 61, 121, 125, and 135. Following receipt of the recommendations, the FAA appointed an internal working group to consider the recommendations.

The FAA working group concurred with most of the recommendations of the task force and recommended that the FAA undertake a rulemaking project that would include the concept of a certificated training center.

Related Activity

Several other FAA rulemaking projects address some of the same sections of 14 Code of Federal Regulations (14 CFR) that are revised in this rule; however, this rulemaking addresses those sections as they relate to the use of simulation.

Special Federal Aviation Regulation (SFAR) No. 58, "Advanced Qualification Program," (Amendment 61–88, effective October 2, 1990, 55 FR 40262) allows air carriers conducting training and testing under part 121 or part 135 to develop innovative approaches to training. Most AQP training programs will involve the use of simulation.

Three projects, listed below, are final rules that the FAA expects to issue soon:

[1] This task force was later subsumed by the Air Transportation Personnel Training and Qualifications Advisory Committee, established by FAA Order 1110.115, May 2, 1990. Today it continues to function as an issues area by the same name under the Aviation Rulemaking Advisory Committee.

This final rule addresses the following: (1) The creation of a new part 142 that contains certification rules and operating rules for training centers; (2) an expanded use of, and credit for, training, testing, and checking conducted in flight simulators and flight training devices in accordance with approved programs conducted at training centers to satisfy all or some of the requirements of SFAR 58, part 61, part 121, part 125, or part 135; and (3) new rules pertaining to Category III authorizations.

The advantage of the training center concept is that it is a common source for standardized, quality training, testing, and checking accessible to any individual, operator, and air carriers. Program approval will be standardized through national guidance, which should prove especially helpful for training centers operating in different FAA regions. The rules applicable to training centers apply nationwide, and training programs, except specialty training courses, are subject to approval by local FAA offices only after detailed review for compliance with national guidance. A key concept in the proposal is standardization of certain elements of training programs, notably: the extent of the use of simulation, the prerequisites for the use of simulation for specific tasks, and simulation instructor and evaluator qualifications.

The FAA proposed a national office to ensure standardization in simulation training. Several commenters supported the proposal to create a national office for standardization purposes. The FAA has decided not to create a national office at this time, however. In the present economic environment, government is increasingly exploring alternative methods of accomplishing many of its missions. Additionally, the FAA subscribes to the concept of decentralization of government to make it more responsive to the users, and accomplishing the objectives of this rulemaking without a national office is consistent with the precept of government decentralization. The FAA is convinced that it can attain and maintain the concept of standardization of simulation training by means more economical than creating a national office.

Detailed guidance will be provided to FAA inspectors and potential training center certificate applicants in the form of handbooks, advisory circulars, and FAA orders. The Flight Standards Service will appoint an ad hoc group of several persons from within existing resources with experience in subjects related to simulation training centers. The ad hoc group will process the initial certificate applications, training specifications, and curriculum approvals. It will ensure that those approvals are standardized nationally and that they represent a smooth transition of existing training programs to the new training regulations.

The Flight Standards Service also will train all its inspectors on features of part 142 training centers. It will provide detailed training to those inspectors who will have training center oversight responsibilities and to Principal Operations Inspectors (POI's) of air carrier certificate holders that may use a training center.

After the steps outlined above are accomplished and the initial workload of certificate applications is completed, the ad hoc group will be dissolved, and approval of training center certificate applications and oversight of training centers will be decentralized in accordance with existing FAA structure and management practices.

This rule does not take away any of the uses for flight training devices currently allowed by 14 CFR, and will have no adverse impact on the airmen who use flight simulation. Providers of flight simulation training, testing, and checking under part 142 will come under new regulatory controls that will enhance the use of qualified flight simulation in approved training programs. The changes are consistent with a state-of-the-art training concept, and they recognize industry recommendations for the expanded use of sophisticated flight simulation. The FAA has determined that, if a student has prerequisite experience, a qualified flight simulator or flight training device used in an approved training program will provide for an effective transfer of skills to the actual aircraft.

In this rule, the FAA implements the joint industry/FAA task force recommendations concerning training centers by using an operational concept that requires a training center to obtain a certificate plus a training specification (similar to an operating specification for part 121 and part 135 operators).

The authority to issue pilot certificates and the provisions permitting certain training, testing, and checking in a flight simulator or flight training device, rather than in an aircraft, remains in part 61.

Part 142 regulates training center certification and operation to ensure that qualified flight simulators or flight training devices are used in conjunction with approved courses and curricula. The benefits of completing a course of standardized instruction in a structured training environment, and in a timeframe that allows for a building-block approach to learning, has been recognized and is reflected in the part 141 flight experience prerequisites for pilot certificates. Thus, part 141 flight experience requirements were used as the basis for many of the part 142 initial requirements.

Part 141 Pilot Schools

Pilot schools certificated under part 141 may continue to operate as they do now. Certification of new pilot schools will also continue under part 141. A part 141 pilot school wishing to use a Level A through Level D flight simulator for more than the hours currently allowed in a pilot ground trainer as described in § 141.41(a)(1), however, will have to become certificated under part 142. (See Advisory Circular (AC) 120–40, *Airplane Simulator Qualification*, as amended, for the current descriptions of levels of flight simulators).

This rule does not include an increase in credits for use of simulators except in the structured environment created by part 142, or as may be individually approved for an air carrier. Part 141 pilot schools that desire to undertake training by use of more sophisticated simulation, in addition to training accomplished by aircraft and flight training devices, may become training centers certificated under part 142. They would apply for certification and course approval under part 142 in the same manner as other applicants.

Advanced Qualification Program (AQP)

This final rule has minimal impact on AQP. It provides the administrative structure for presentation of AQP to any group other than aircrews subject to a part 121 or part 135 approved training program who might receive the AQP training exclusively from their employing certificate holder. All AQP approval criteria, application procedures, instructor qualifications, recordkeeping, and data collection procedures, among others, remain as they are described in SFAR 58 or its superseding rules.

This final rule changes the definition of a training center that appears in SFAR 58 to make it compatible with that term as used in part 142; provides that trainers other than part 121 or part 135 certificate holders presenting an approved AQP to their aircrew employees will have to do so under a part 142 certificate; and allows persons other than part 121 or part 135 certificate holders to present training under AQP if that training is approved in accordance with SFAR 58.

Specific relationships between training center certificate holders and holders of AQP authorizations, and of training center certificate holders who become holders of AQP authorizations, are discussed in the section of this document entitled "Section-by-Section Summary of the Comments" which follows.

Terms

In response to comments, the FAA has either added or revised terms to expand and clarify the final rule. Each modification of a term or word is discussed in the "Section-by-Section Summary of the Comments." A summary of the important new terms and words is provided below.

Flight Simulator

Section 61.1a defines a flight simulator. In the past, the terms "simulator" and "training device" have created confusion, so they are more clearly defined under this section. As defined, the terms make clear those devices that are not considered a flight simulator or a flight training device for purposes of this part.

Flight Training Device

In several sections in this rule, flight training devices are listed with aircraft and flight simulators as permitted flight training equipment for various training, testing, or checking tasks of pilots, although no flight training device may exist for some tasks. The FAA intends to allow the possibility of approving flight training devices for training, testing, and checking a wide variety of tasks to allow and encourage the development of flight training devices in the future. By permitting the possibility of a wide variety of uses for flight training devices, which are generally less expensive than flight simulators, the FAA hopes to encourage the growth of simulation.

Section 61.1a defines a flight training device as a replica of an aircraft's instruments, equipment, panels, and controls that is located in an open flight deck area or in an enclosed aircraft cockpit. This definition includes the equipment and programs necessary to represent the aircraft in ground operations and flight conditions. As defined, a flight training device is not required to have a force cueing or visual system. However, like a flight simulator, a flight training device is a device that requires approval by the Administrator for all uses that may lead to credit for aeronautical experience, required training, testing, and checking.

Category III Operations

This rule recognizes that technological advances permit aircraft operated under part 91 to conduct Category III extreme reduced visibility landing approaches. Part 91, specifically §§ 91.191 and 91.205, proposed to include implementing requirements to conduct Category III operations. Part 61 has been amended to specify the training and testing requirements for Category III operations. Part 1, § 1.1, Category III approaches.

Simulated Instrument Flight Rules (IFR) Conditions

Some airmen have expressed concern about the meaning of the terms "simulated IFR conditions" or "simulated instrument conditions" in part 61. There appears to be confusion over whether these conditions can be achieved by the use of hood devices only. These terms are used throughout the 14 CFR to mean that instrument conditions may be simulated by artificially limiting pilot visibility outside the cockpit. Pilot visibility can be limited by a hood device, by artificially limiting visibility in an approved flight simulator or flight training device, or by other appropriate means. Section 61.45 permits the artificial limitation of visibility by these various means.

Tests and Checks

Generally, this rule uses the word "test" in lieu of the word "check." Specifically, this rule uses the terms "initial test," "recurrent test," and "practical test." These terms refer to an examination, whatever its nature, on which the applicant receives a grade, even though the grade may be only "pass" or "fail."

An exception is found in § 61.58 that requires a "proficiency check" for a pilot in command (PIC) of an aircraft. A "proficiency check" is one type of periodic review of a pilot's proficiency as a PIC, whereas an initial test determines that pilot's qualification to be a pilot. Thus, when referring to this type of requirement, the FAA believes that the word "check" is more appropriate.

Aircraft

Prior to this rule, the only flight simulators referred to in the regulations were airplane simulators. The word "aircraft" is used throughout this rule, however, to indicate that the rule applies to training, testing, and checking in helicopters as well as in airplanes. When a requirement is meant to apply to only a particular category or class of aircraft, the appropriate category or class, such as "airplane," "rotorcraft," or "helicopter," is specified.

Easily Reached Controls

There has been some question about the meaning of the term "easily reached and operable in a normal manner" which appeared in § 61.45. This term, as amended, means that controls that are "easily reached" are those that can be reached by any airman or applicant seated in a designated pilot seat, with seat belts, shoulder harness, or other provided restraints fastened.

Conventional Manner

This rule also changes the term "normal manner," as it refers to the operation of an aircraft, to "conventional manner" and defines this term. This new definition should eliminate potential confusion associated with the use of such terms as "normal," "abnormal," or "emergency" performance. These different terms appear in many aircraft flight manuals and training curriculums. As used in this rule, in order to perform a normal, abnormal, or emergency maneuver in a "conventional manner," an applicant must use an aircraft that is equipped with one of the following: (1) A control wheel, stick, yoke, or cyclic control that in cruise flight, and in a forward movement, causes a decrease in pitch attitude, and rearward pressure causes an increase in pitch attitude; a left movement causes a bank to the left, and a movement to the right causes a bank to the right; and (2) rudder pedals or antitorque pedals which, when depressing the left pedal, cause the aircraft nose to yaw left and, when depressing the right pedal, cause the nose to yaw right. Aircraft with controls that operate differently than described above may still be used for a practical test, if the examiner determines that the flight test can be conducted safely in the aircraft.

Training Center

The characteristics of a training center are addressed in § 2 of SFAR 58 and several sections of part 142. Generally, it is defined as an entity that must hold an air agency certificate issued under part 142 and must comply with all applicable sections of part 142. It should be noted that whenever the term training center appears in this rule it includes satellite training center.

Supervised Operating Experience

Supervised operating experience (SOE) is experience required to remove certain limitations from an airman's certificate. The limitation that may be removed by SOE is a limitation on PIC privileges for a specified aircraft type issued to certain less-experienced pilots who use high level simulation only for all training and testing for a certificate, an added rating, or a certificate with an added rating. The required SOE must be accomplished by serving as PIC under the supervision of a qualified and current PIC in the airplane type to which the limitation applies. The SOE must be performed in the seat normally available to the PIC. The limitation may be removed by presenting evidence of the SOE to any FSDO. SOE parallels the operating experience requirement long a feature of air carrier training and qualification programs, but is less burdensome in that a current and qualified PIC instead of a check airman may provide the supervision. More detailed discussion on this matter follows in the response to comments about §§ 61.64 and 61.158.

Summary of Comments

Notice 92–10 was published in the *Federal Register* on August 11, 1992 (57 FR 35888). The comment period closed on December 9, 1992. The FAA received 328 comments in response to Notice No. 92–10: 223 comments from various sectors of the interested public, namely pilots and certificated flight instructors; 48 comments from various aviation businesses; 13 comments from the major aviation associations; 11 comments from commercial air carriers; 11 comments from the aviation/academic training school community; and 4 comments from governmental organizations. Eighteen miscellaneous comments were either duplicates or entered to this docket in error. The FAA considered all of the comments, even those received after the comment period closed.

broad categories and are discussed in further detail below. Each comment is discussed in the section of this document entitled "Section-by-Section Analysis of the Comments."

General Issues Covered in the Comments

The following subjects received the most comments. These comments are responded to individually in a separate section of this document to follow entitled "Section-by-Section Summary of the Comments." The issues raised and the nature of the comments are summarized below:

1. *The proposed definitions and guidelines regarding the use of flight simulators and flight training devices will ensure standardization of training.*

Approximately 15 commenters supported the standardization of training offered by new part 142. Several of the commenters, including Simulator Training, Inc., (STI) and the Aircraft Owners and Pilots Association (AOPA), suggested that part 142 define and standardize training center operations, and reduce the number of exemptions required for the use of simulation. Additionally, the Air Line Pilots Association (ALPA) supported the standardized certification requirements proposed by part 142. ALPA stated that the certification process "will assure some level of minimum performance for these training centers, require accountability for training programs and equipment, and provide more consistent FAA oversight."

Northwest Airlines, Inc., (NWA) stated that "the proliferation of programs has reached a level where increased regulatory controls must be imposed." NWA and other commenters, including FlightSafety International (FSI), strongly supported the proposal of an FAA part 142 national office. These commenters suggested that the establishment of centralized resources would help to promote standardization and consistency in training and evaluation.

2. *The requirements for obtaining a part 142 certificate are burdensome, costly, and over restrictive.*

Approximately 30 commenters objected to various proposals for the part 142 certification process. The majority of these commenters specifically cited proposed §§ 142.17(b)(3) and 142.17(d), suggesting that they are unnecessarily burdensome and costly.

Fifteen commenters, primarily pilot schools, opposed the proposal that the principal business office of a part 142 certificate holder cannot be shared with another certificate holder. The commenters see this proposed restriction as imposing costly and unnecessary administrative duplication.

Various commenters indicated that the requirement that a training center own or lease at least one FAA-approved flight simulator would exclude many smaller training institutions from the benefits of part 142 participation due to costs and thereby preclude some students from receiving the benefits of advanced simulation training. In addition, several commenting part 121 certificate holders stated that if part 121 certificate holders are required to apply for a separate certificate under part 142, they would be required to purchase duplicate flight training equipment and facilities. They stated further that part 142 certificate holders would be precluded from leasing "dry" simulator time from part 121 certificate holders possessing such training equipment.

3. *A part 142 certificate should not be required to continue to provide training to employees of other part 121 or part 135 certificate holders.*

Several commenters opposed the proposals which would require training entities providing currently approved training programs to be certificated under part 142. These commenters represented a diverse group that included air carrier certificate holders, persons interested in AQP, and current simulator exemption holders.

4. *Flight experience gained from the use of simulation cannot fully replace the operational experience gained in the actual flight environment.*

Several commenters, namely some individuals and the National Transportation Safety Board (NTSB), expressed concern regarding the reduced hours of actual flight experience proposed in various sections

considered in the part 61, 141, and 143 review. The FAA carefully considered which topics to include in this rulemaking and which to include in the part 61, 141, and 143 review. Generally, if a topic relates to simulation, it was addressed in the NPRM for this rulemaking. Some other part 61 topics also are addressed in this rulemaking if it was necessary to revise the section for consistency of style and paragraph numbering.

SFAR 58

SFAR 58.2 Definitions

The FAA proposed in Notice 92–10 to make the definition of training centers in this section compatible with the definition of that term as contained in § 142.3.

Several commenters expressed the belief that the proposed definition was confusing or ambiguous. The FAA agrees that the definition should be more clear and has simplified the definition. The revised definition includes those persons who obtain, and operate under, a part 142 certificate, and those part 121 and part 135 certificate holders who present, under AQP, training that they are required to present under part 121 or part 135.

Other commenters suggested rewording the definition to exclude those training providers who already hold a part 121 or part 135 certificate, or those persons who might provide AQP training for those certificate holders. This is an issue of the applicability of part 142, which is discussed in the section-by-section analysis of § 142.1 and further defined in § 142.3.

SFAR 58.11. Approval of Training, Qualification, or Evaluation by a Person Who Provides Training by Arrangement

Delta Air Lines, Inc., (Delta) in a comment typical of several others, said that there appears to be no sound reason to change the existing SFAR 58 provision for approval of AQP training, qualification, or evaluation to be offered by a part 142 training center. It went on to say that approval under SFAR 58 of training programs, instructor or evaluator qualification, and use of training equipment should constitute approval under part 142.

The FAA agrees. The FAA had that intent when making the original proposals. For example, in the NPRM preamble discussion of § 142.39, the FAA stated:

"The FAA believes that approval of a curriculum under SFAR 58, Advanced Qualification Program (AQP), should, for that applicant, constitute complete approval of that curriculum for use by a training center certificated under part 142, since the AQP application contains curriculum criteria at least as detailed as the part 142 curriculum requirements set forth in proposed §§ 142.39 and 142.77."

Several air carriers asked why the FAA proposed in this rulemaking to fix an expiration date for SFAR 58.

SFAR 58 may or may not expire as determined by separate rulemaking action underway at this time. Under this final rule, a part 121 certificate holder with an AQP authorization may continue, without certification under part 142, to train persons who are aircrew employees of another certificate holder who has an AQP authorization.

Minor editorial changes have been made to clarify the intent of the proposed rule. This section is adopted with the revisions discussed above.

Part 61

§ 61.1a Definition of Terms

This section has been amended to include definitions for terms used in part 61. The following terms are defined:

(1) Is a full-sized airplane cockpit replica of a specific type of airplane, or make, model, and series of airplane;

(2) Includes the hardware and software necessary to represent the airplane in ground operations and flight operations;

(3) Utilizes a force cueing system that provides cues at least equivalent to those cues provided by a 3 degree freedom of motion system;

(4) Utilizes a visual system that provides at least a 45° horizontal field of view and a 30° vertical field of view simultaneously for each pilot; and

(5) Has been evaluated, qualified, and approved by the Administrator.

(c) ''Flight Simulator, Helicopter'' means a device that—

(1) Is a full-sized helicopter cockpit replica of a specific type of aircraft, or make, model, and series of helicopter;

(2) Includes the hardware and software necessary to represent the helicopter in ground operations and flight operations;

(3) Utilizes a force cueing system that provides cues at least equivalent to those cues provided by a 3 degree freedom of motion system;

(4) Utilizes a visual system that provides at least a 45° horizontal field of view and 30° vertical field of view simultaneously for each pilot; and

(5) Has been evaluated, qualified, and approved by the Administrator.

(d) ''Flight Training Device'' means a device that—

(1) Is a full-sized replica of instruments, equipment, panels, and controls of an airplane or rotorcraft, or set of airplanes or rotorcraft, in an open flight deck area or in an enclosed cockpit, including the hardware and software for systems installed, necessary to simulate the airplane or rotorcraft in ground operations and flight operations;

(2) Does not require a force (motion) cueing or visual system; and

(3) Has been evaluated, qualified, and approved by the Administrator.

(e) ''Set of airplanes or rotorcraft'' means airplanes or rotorcraft which all share similar performance characteristics, such as similar airspeed and altitude operating envelope, similar handling characteristics, and the same number and type of propulsion system or systems.

Aerospace Industries Association (AIA) and Boeing Commercial Airplane Group (Boeing), in identical comments, stated that this part should not have new definitions for flight simulators and flight training devices, but should instead incorporate by reference the definitions for these items as contained in Advisory Circular (AC) 120–40B and AC 120–45A.

The definitions of ''flight simulator'' and ''flight training device'' set forth in new part 142 are, in all aspects, identical to those contained in the referenced AC's. The FAA has determined that the definitions should be contained in the regulatory text so that they are readily available to applicants for, and holders of, a part 142 certificate and other persons who have an interest in the regulations concerning training centers.

Crew Systems, Andrews University, and an individual stated that definitions should not be in this section, but rather in part 1 of 14 CFR, and that the proposed definitions might have a different meaning to different people. The definitions contained in part 61 are applicable to that part of 14 CFR. Some

not changed by this definition; they remain the same for the operating part for which the person was designated. Additionally, many of the persons cited by Airbus could qualify as an authorized instructor in other parts, including part 142. See the provision of § 61.1a(a)(2) as adopted.

One person stated that including the words "full-sized replica" in the definition of a flight training device precludes the approval of personal computer flight simulation technology.

The comment is accurate. The FAA is convinced that simulation has benefit only if behaviors learned can be transferred to the aircraft. The FAA is convinced that no effective transfer of learning has been demonstrated except from flight simulators and flight training devices that accurately replicate the performance of an aircraft. As discussed in the NPRM, AC 120–45, as amended, describes the minimum criteria for flight training devices which will result in replication of aircraft performance suitable for specific training, testing, and checking. The FAA has under development a new AC 120–46, "Use of Airplane Flight Training Devices (In Flight Training and Checking for Airman Qualification and Certification)," which will provide details about which tasks a particular level of flight training device may be used for training credit and which tasks one may be used for testing. At this time, no flight training aid based on what is commonly known as "personal computers" meets the criteria of AC 120–45. Accordingly, the use of personal computer flight simulation technology is considered unacceptable.

One commenter stated that this section, and all other proposed revised sections of part 61, should be deleted and considered in the phase II of the part 61, 141, and 143 review, which was referenced earlier as a related rulemaking project.

The FAA does not agree that this would be an appropriate action. The purpose of this rulemaking was to undertake a comprehensive review, and revision if necessary, of all rules with the potential for increasing the use of simulation for airman training, testing, and checking. Many of these rules are contained in part 61; therefore, the FAA proposed revisions to certain sections contained in that part.

§ 61.2 Certification of Foreign Pilots and Flight Instructors

This section proposed rules for training centers and their satellite training centers for issuing certificates and ratings outside the United States. Specifically, this section proposed that training centers, and their satellite training centers, certificated under part 142 of this chapter, be allowed to do the following outside the United States: (1) Add additional ratings and endorsements to certificates issued by the Administrator under the provisions of part 142; and (2) issue certificates to U.S. citizens within the authority granted to the training center by the Administrator.

The National Association of Flight Instructors (NAFI) commented that it has long been an FAA policy to not issue U.S. certificates or additional ratings to foreign nationals outside the United States.

The FAA agrees with the commenter that, under § 61.2, the FAA does not issue U.S. certificates to foreign nationals outside the United States unless issuance meets the need stipulated in that section. However § 61.2, has, for several years, allowed rating(s) to be added to a U.S. certificate of a foreign national outside the United States. Further, § 61.13 has, for several years, allowed the FAA to issue certificates and added ratings, subject to this need and to collection of the reimbursement fee required by part 187 (60 FR 19628; April 19, 1995; Fees for Certification Services and Approvals Performed Outside the United States, Rule and Notices.)

NAFI further states that proposed paragraph (b)(1) does not have a limitation contained in proposed paragraph (a)(1). It recommends that the following limitation contained in paragraph (a)(1) be added to paragraph (b)(1): "The pilot certificate or rating is needed for the operation of a U.S.-registered civil aircraft."

Modern multinational corporations may operate aircraft of different countries of registry. The commenter has not provided sufficient rationale for imposing the U. S. certification restriction. The FAA has determined,

that guidance.

Other commenters indicated that maintaining standardization of training center activities for those training centers outside the United States will cause a workload on the FAA.

The FAA agrees that creation of foreign training centers will impose a workload on the FAA. See the FAA plan for compensation for the workload imposed by training centers outside the United States in the discussion of comments received in response to proposed § 142.20 (adopted as § 142.19), "Foreign training centers: Special rules."

For the reasons discussed, this section is adopted as proposed, except for editorial changes to make it clear that training centers prepare, train, and recommend applicants for a certificate or rating, but do not actually issue a certificate or rating unless the training center has specific authorization to issue airman certificates.

§ 61.3 Requirement for Certificates, Ratings, and Authorizations

The FAA proposed to amend the lead-in paragraph for § 61.3(d) and to add a new paragraph (i).

As proposed, paragraph (d) inadvertently would have prevented lighter-than-air instruction without a flight instructor certificate. That was not the intent of this rule. Therefore, language allowing such instruction without a flight instructor certificate is restored to paragraph (d) of this section. The FAA did not receive any comments on proposed paragraph (d), therefore, with this minor correction, paragraph (d) is adopted as proposed.

Proposed paragraph (i) prescribed requirements for pilot category III authorization. It reads as follows:

"(i) Category III pilot authorization.

(1) No person may act as pilot in command of a civil aircraft during Category III operations unless—

(i) That person holds a current Category III pilot authorization for that category or class of aircraft, and the type of aircraft, if applicable; or

(ii) In the case of a civil aircraft of foreign registry, that person is authorized by the country of registry to act as pilot in command of that aircraft in Category III operations.

(2) No person may act as second in command (SIC) of a civil aircraft during Category III operations unless that person—

(i) Holds a valid pilot certificate with category and class ratings for that aircraft and a current instrument rating for that category aircraft;

(ii) Holds an airline transport pilot certificate with category and class ratings for that aircraft; or

(iii) In the case of a civil aircraft of foreign registry, is authorized by the country of registry to act as SIC of that aircraft during Category III operations."

Some commenters, namely TWA, Delta, American Airlines (American), ATA, British Aerospace Inc., Training Center (BAe), and AMR Combs (AMR), believe that part 121 and part 135 certificate holders should not be required to comply with paragraph (i) of this section, as they have not been required to comply with the Category II requirements of paragraph (f) of this section in the past.

There is an alternate mechanism in part 121 to authorize certificate holders under that part to conduct reduced visibility instrument approaches. That alternative assures a level of safety equivalent to this rule. Because of the alternate mechanism in part 121 to authorize the commenters and similarly-situated persons to conduct Category II and Category III operations, the FAA agrees with the commenters, and has added a new paragraph (j) to except part 121 and part 135 certificate holders from compliance with paragraph (i). Current paragraph (f) has been revised in this final rule to conform it to the format

be approved unless the person using them expected to get some credit for that use to satisfy some requirement of 14 CFR.

The FAA agrees, and the rule text has been amended to clarify that only those flight simulators and flight training devices used to satisfy training, testing, or checking functions, as may be necessary to meet FAA regulatory requirements, must be qualified by the Administrator.

NAFI said that guidelines must be established to specify the requirements for qualification and approval of flight simulators and flight training devices to prevent FAA inspectors from arbitrarily applying their personal standards, and that, once a flight simulator or flight training device is approved by the FAA, the FAA should not require another inspector to approve another of the same make and model.

The FAA agrees that each FAA inspector should not arbitrarily determine standards for qualification and approval of flight simulators. The FAA has established guidelines and technical standards for flight simulators and flight training devices, in AC 120–40, as amended, and AC 120–45, as amended, respectively. These publications are available from the Government Printing Office and may be reviewed at any FSDO. These advisory circulars are made available to facilitate standardization, qualification, and recommendations for approval of particular maneuvers and procedures for each flight simulator and level 5 through 7 flight training device, as they are defined at this time. FAA inspectors may approve the use of flight simulators and flight training devices for the maneuvers and procedures of a particular curriculum. To help ensure standardization, the FAA will provide national guidance for approval of training programs for all part 142 training centers. This guidance should preclude widespread interpretation on the part of individual inspectors.

§ 61.13 Application and Qualification

The FAA proposed to revise paragraph (e) to make this section apply to Category III authorizations as well as to Category II authorizations. The revised paragraph reads as follows:

(e) The following requirements apply to a Category II pilot authorization and to a Category III pilot authorization:

(1) The authorization is issued by a letter of authorization as a part of the applicant's instrument rating or airline transport pilot certificate.

(2) Upon original issue the authorization contains a visibility limitation—

(i) For Category II operations, the limitation is 1,600 feet RVR and a 150-foot decision height; and

(ii) For Category III operations, each initial limitation is specified in the authorization document.

(3) Limitations on an authorization may be removed as follows:

(i) In the case of Category II limitations, a limitation is removed when the holder shows that, since the beginning of the sixth preceding month, the holder has made three Category II ILS approaches with a 150-foot decision height to a landing under actual or simulated instrument conditions.

(ii) In the case of Category III limitations, a limitation is removed as specified in the authorization.

(4) For the practical test required by this part for a Category II or a Category III authorization, a flight simulator or flight training device may be used for simulated instrument conditions, if approved by the Administrator for simulated instrument conditions.

AIA and Boeing said that § 61.13(e)(3)(i) should contain the same provision regarding simulated instrument conditions that appears in § 61.13(e)(4); i.e., ". . . a flight simulator or flight training device may be used for simulated instrument conditions. . . ."

135 certificate holders since the FAA did not intend to propose, under § 61.3, that a letter of authorization be required for these operations. These parts prescribe their own requirements for such operations.

Proposed § 61.3 has been revised to make it clear that the exception for part 121 and part 135 certificate holders also applies to Category III authorization. (See the discussion of § 61.3).

Airbus suggested additional text for this section that would delete ILS approaches, because MLS, GPS, and other approaches are likely in the future.

The FAA agrees that the regulations need to be modified to reflect changing technology; however, this was not a subject of these proposals and cannot be addressed in this rule at this time.

Airbus also suggested that this section be amended to specify the quality of the simulated visual scene required for the practical test.

The FAA agrees that the quality of the simulated visual scene that may be used to complete the Category II or Category III practical test is of great importance. The sections of the rule that actually require and authorize training and testing to show competence in reduced visibility operations, §§ 61.3, 61.67, and 61.68, specify that the practical test must be accomplished under an approved training program of an air carrier for that air carrier's aircrews, or in an approved training program of a part 142 certificate holder. Training program approval criteria for each of those training programs specify, or will specify, that a flight simulator must be qualified and approved by the FAA for each maneuver, procedure, and crewmember task. Further guidance for the technical requirements of flight simulation is published in AC 120–40 and AC 120–45, as amended. The FAA believes that the quality control provided by the provisions described above is satisfactory. Quality of the visual scene in all modes of flight and the quality of simulation in general is a high priority for the FAA.

For the reasons discussed, this section rewords paragraph (e)(4) and is otherwise adopted as proposed.

§ 61.21 Duration of Category II and Category III Pilot Authorizations

In addition to a change in the title, this section proposed that Category II and Category III pilot authorizations would expire 6 months after last issued or renewed.

ATA and a few member air carriers commented that these proposals included a duration of authorizations that is too restrictive for part 135 and part 121 certificate holders.

The provisions of § 61.21 were not intended to apply to operations conducted by part 121 and 135 certificate holders since the FAA did not intend to propose, under § 61.3, that a letter of authorization be required for these operations. These parts prescribe their own requirements for such operations.

Proposed § 61.3 has been revised to make it clear that the exception for part 121 and part 135 certificate holders also applies to Category III authorization. (See the discussion of § 61.3).

Therefore, this section does not apply to a part 121 or part 135 certificate holder.

Therefore, this section is adopted as proposed.

§ 61.39 Prerequisites for Flight Tests

The FAA proposed in this section to specify a 60-calendar-day time limit for completion of all increments of the practical test (i.e., the oral increment, the flight simulator increment, and the flight increment).

In the event that the entire practical test is not satisfactorily completed within the prescribed 60 calendar days, an applicant is required to retake the entire practical test, including those increments satisfactorily completed more than 60 calendar days previously.

Proposed paragraph (a) provides that an applicant may use a flight simulator or a flight training device for those tasks of a practical test for which the flight simulator or flight training device has been approved. Previously, this section did not clearly permit the use of flight simulators or flight training devices for practical tests.

Previously under part 61, a flight simulator or flight training device could be used only to demonstrate some SIC qualifications and also to train and test for the ATP certificate. NAFI commented that the FAA should complete guidelines to specify which maneuvers, procedures, and crewmember tasks can be trained, tested, or both, by use of each level of simulation. The FAA agrees, and is drafting such a document (AC 120–46) at the present time. (See also the response to comments about § 61.1).

ATA said, in a comment similar to several others, that the proposed amendments to this section are not necessary, since ". . . the purpose of the current rule was not to specify that an aircraft must be used for the flight test, but rather to prescribe the aircraft requirements for registration, airworthiness, and equipment." ATA continues by observing that "Amendment 61.45, effective Feb. 2, 1970, clearly authorizes the use of simulators for part of the ATPC/TR flight test. . . ."

Current paragraph (a) of this section deals with the equipment an applicant must furnish for each test, as well as with the requirements for registration and airworthiness of that equipment. The wording of the current paragraph excludes any equipment except aircraft from being used for the practical test, except as provided in §§ 61.55 and 61.157. The proposed rule would allow simulation to be used for those tasks of the practical test for which the simulator is approved. The FAA considers this expanded use of simulation justified for reasons stated in the preamble to the NPRM. Accordingly, this section is adopted as proposed.

Jeppesen-Sanderson and AMR questioned how such tasks as cross-country skills, rectangular courses, S-turns across a road, and turns around a point can be evaluated by use of simulation.

At the date of this final rule, there are no flight simulators or flight training devices that have been approved to evaluate several tasks, including the examples offered by these commenters.

The intent in the proposal was to permit an increased use of simulation, in appropriate cases, without having to amend the rules each time that technological advances permit one of these tasks to be evaluated in flight simulation. With the assurance that simulation may be used to meet practical test requirements when it has the technical capability to do so, manufacturers of such devices should be encouraged to develop increasingly realistic simulation. Even with regulatory authority to use simulation for tasks of a practical test, simulation cannot be used for those tasks until the simulation medium has been developed, evaluated, and qualified by the FAA to evaluate such tasks.

Airbus commented that the proposed revisions are unworkable for an aircraft manufacturer's training center and, if implemented, would impose a severe economic burden on the training center and the part 121 operators it supports.

Although Airbus did not specifically reference § 142.57 in its comment, it appears Airbus is addressing the aircraft certification, registration, and airworthiness requirements that are discussed under § 142.57 below. Training centers, which are to be certificated under part 142, have distinct requirements for aircraft certification, registration, and airworthiness. Those requirements, as adopted, are further discussed in § 142.57.

Proposed paragraph (c) provided that an applicant for a practical test must provide an aircraft with engine and flight controls that are easily reached, and that can be operated in a conventional manner by both the applicant and the evaluator. The paragraph also provided that the evaluator may conduct a practical test in an aircraft with different features.

AMR stated that ". . . 61.45(c)(2)(ii) seems to assume that an evaluator will be in a pilot's seat when conducting a practical test in an aircraft. However, evaluators and FAA inspectors currently may

use of vision-restricting devices that more realistically create the seeing conditions the pilot is likely to encounter during the instrument-to-visual transition, including visual illusions associated with maneuvering by visual reference to landing in restricted seeing conditions. Airbus suggests rewording the paragraph to allow equipment that restricts an applicant's visual reference to replicate what might be seen during a reduced visibility approach transition to a landing.

The FAA notes that this section is directed at maneuvers and procedures that must be done solely by reference to flight instruments; it was not intended to, and is not adequate to address, maneuvering partially by reference to instruments and partially by reference to obscure visual references to objects outside the cockpit. The FAA lists, in separate publications, what objects must be visible at a specified point on an instrument approach in order to continue by visual reference. The FAA is not aware of a device that can be used in an aircraft to obscure visibility of objects other than those listed for continuation of an instrument approach.

The FAA agrees with the commenter that this area of flight is critical. This is an area of flight that simulation can replicate much better than an actual aircraft. For simulation, the FAA requires that the simulated visual presentation be capable of displaying a scene with visibility as restricted as the visibility that the applicant will be authorized to observe when completing approaches. Guidance for scene presentation for simulation is contained in AC 120–40, as amended.

This section is adopted with the changes discussed.

§ 61.51 Pilot Logbooks

The FAA proposed to revise paragraph (b)(1)(ii) to allow pilots to log the time accrued in a simulated flight lesson. The proposed text read as follows:

"(b) * * *

(1) * * *

(ii) Total time of flight or lesson."

AMR commented that the word "flight" should be added before "lesson."

The FAA agrees and has changed the paragraph accordingly.

AMR also commented that the requirement of present paragraph (b)(1)(iii), which states "Place, or points of departure and arrival" is pointless in the context of a simulated flight lesson, as it is quite possible to conduct a simulator training session and have no point of departure or arrival.

The FAA agrees, and has changed the paragraph to except simulated flights from those sessions for which a point of departure and arrival must be entered.

As proposed, § 61.51(c)(2)(i) has been revised, including shifting the provision for recreational pilots to a new paragraph (iv), to make that paragraph easier to read. No substantive change has been made to the previous provision. The reference to a sole occupant of an aircraft has been removed since such a person by definition is the pilot in command.

The FAA proposed to revise paragraphs (b)(3)(iii) and (c)(4)(ii) to permit the logging of instrument flight time in an approved flight simulator or approved flight training device.

One commenter said that paragraph (c)(4)(ii) ". . . only permits logging of simulated instrument conditions in an approved and qualified flight simulator or qualified and approved flight training device. It leaves the logging of simulated instrument flight time by utilization of a view limiting device in limbo and not discussed."

The FAA points out that the wording of this paragraph states that flight simulation "may" be used, not that it "must" be used, and that, in both the NPRM preamble and in the preamble to this

Further, § 61.51(c)(5) provides that all time logged as instruction time must be certified by the authorized instructor from whom it was received. This requirement is intended to ensure that an applicant's logbook reflects all required instruction which was provided by an authorized instructor.

With the amendment discussed, this section is adopted as proposed.

§ 61.55 Second-in-Command Qualifications

The FAA proposed in § 61.55(b)(4) that initial SIC qualification tests for a particular category and class or type of aircraft require at least one takeoff and one landing to be satisfactorily completed in an aircraft of that category, class, and type as applicable.

Several commenters expressed overall agreement with this proposed section.

Boeing and AIA commented that, if the simulator used is qualified for the landing maneuver, the use of an airplane is unnecessary.

The FAA believes that some minimal experience with the category, class, and type of aircraft, if applicable, is required for those SIC applicants not previously qualified in any capacity in an aircraft requiring a crew of more than one person. With the exception of the takeoff and landing that must be performed in the aircraft, the FAA believes that, based on its evaluation of the results of training and testing in flight simulators, the training and testing for SIC qualifications can be satisfactorily demonstrated in a part 142 training course that is subject to FAA approval.

Paragraph (b)(4) of this section was reworded slightly to make it clear that the requirement to complete only one takeoff and one landing in an actual aircraft applies only to persons who complete the rest of the requirements of this section in an approved course at a training center certificated under part 142.

§ 61.56 Flight Review

Under the previous § 61.56, the flight review could be performed only in an aircraft. A new paragraph 61.56(h) to this section proposed the use of flight simulators or flight training devices for the flight review if: (1) The flight simulator or flight training device is approved by the Administrator for that purpose; and (2) the flight review is accomplished in an approved course conducted by a training center certificated under part 142.

Jeppesen-Sanderson and the National Air Transportation Association (NATA), representing a consensus of General Aviation Manufacturers Association, Helicopter Association International, and others, commented that simulation should be allowed for the review, in approved courses conducted under part 141 or part 142.

The FAA does not agree that part 141 should be changed in this rule to allow pilot schools to conduct the flight review. Part 142 training centers may conduct flight reviews using simulation because they will have substantially more required in the way of training capability by having the following: (1) at least one flight simulator or Level 6 or Level 7 flight training device; (2) considerably more detailed and structured training programs; and (3) more demanding instructor qualifications than those required under part 141.

United, in a comment similar to several others, recommended that the flight review should be permitted by simulation in an approved course conducted by a training center certificated under part 121 or part 142.

There are no training centers now certificated under part 121 or any other part. Part 121 certificate holders have a training apparatus that may be called a school, branch, division, center, and a variety of other names. There is little doubt that many of them, with minimal effort at tailoring present training programs, could become training centers certificated under new part 142. There is no need to change

accomplished in an appropriate flight simulator or flight training device. Previously, landing maneuvers, which likely would be required during a flight review, could be conducted only in a flight simulator qualified as Level B or higher. Section 61.57(g)(3), however, provides a means for the review to be accomplished in a Level A flight simulator or in a flight training device.

One commenter said, in essence, that he believed the flight review should be an evaluation of maneuvers and procedures required for the issuance of the certificate applied for, and that not all maneuvers and procedures can be evaluated in a simulator.

The FAA agrees that not all maneuvers and procedures can be evaluated in a flight simulator at the present time. Turns about a point, chandelles, lazy eights, among others, currently cannot be simulated. However, § 61.56 does not require any specific maneuvers and procedures. An airman may complete a flight review in a simulator only if the review is undertaken after completion of an approved course. The FAA believes that the potential benefits of a structured review, subject to FAA approval, consisting of various subjects and a selection of various, but unspecified, maneuvers and procedures outweigh the fact that flight simulators cannot, at this time, replicate all maneuvers and procedures required of all certificate levels.

For the reasons discussed, this section is adopted as proposed.

§ 61.57 Recent Flight Experience: Pilot in Command

In addition to a change in the title of this section to indicate that it contains PIC currency requirements, the NPRM proposed to revise paragraphs (c) and (d) to read as follows:

"(c) General experience.

(1) Except as otherwise provided in this paragraph, no person may act as pilot in command of an aircraft carrying passengers, or of an aircraft certificated for more than one required pilot flight crewmember, unless that person meets the following requirements—

(i) Within the preceding 90 calendar days, that person must have made three takeoffs and three landings as the sole manipulator of the flight controls in an aircraft of the same category and class and, if a type rating is required, of the same type of aircraft.

(ii) If the aircraft operated under paragraph (c)(1)(i) of this section is a tailwheel airplane, that person must have made to a full stop the landings required by that paragraph in a tailwheel airplane.

(2) For the purpose of meeting the requirements of this section, a person may act as pilot in command of a flight under day visual flight rules or day instrument flight rules if no persons or property are carried other than as necessary for compliance with this part.

(3) Paragraph (c) does not apply to operations conducted under part 121 or part 135 of this chapter.

(4) The takeoffs and landings required by paragraph (c)(1) of this section may be accomplished in a flight simulator or flight training device subject to the following—

(i) The flight training device or flight simulator must have been qualified and approved by the Administrator for landings; and

(ii) The flight simulator or flight training device must be used in accordance with an approved course conducted by a training center certificated under part 142 of this chapter.

(d) Night experience.

(1) No person may act as pilot in command of an aircraft carrying passengers at night (the period beginning 1 hour after sunset and ending 1 hour before sunrise as published in the American Air Almanac) unless, within the preceding 90 days, that person has made not fewer than three takeoffs and three

(ii) Used in accordance with an approved course conducted by a training center certificated under part 142 of this chapter.''

FSI suggested that paragraphs (c) and (d) of this section should be changed to ''be consistent with § 121.439.''

The FAA must presume that the recommendation is to change paragraph (c), as paragraph (d) pertains to night recency of experience, and there is no night recency of experience requirement in § 121.439. The deletion of the night landing requirement was not proposed and is not considered in the final rule. To make paragraph (c), general experience, including day landings, consistent with § 121.439 would require operators to have check airmen, operations specifications, and require each airman to have specific previous experience in the airplane type (with no provision for aircraft not requiring a type rating) in operating parts other than part 121 and part 135. Such dramatic changes to part 91, or other parts of 14 CFR, would simply not be economically justified. This rulemaking is intended to encourage and accommodate the use of simulation for more extant training, testing, and checking tasks, but not to change the tasks required for any particular certificate, rating, or privilege. Therefore, paragraphs (c) and (d) are adopted as proposed.

Also, the NPRM proposed to amend paragraph (e) to permit pilots to meet instrument currency requirements in an approved flight simulator or flight training device.

NWA recommended that proposed paragraph (e) include an exception stating that the requirements of § 61.57 do not apply to operations conducted under part 121 and part 135, similar to the construction of paragraphs (c) and (d) of § 61.57.

During the comment period and final drafting stage for this final rule, the FAA was separately considering a petition for exemption or other regulatory relief from the requirements of paragraph (e) for members of ATA. On November 11, 1994 the FAA published a final rule (59 FR 56385) that revised § 61.57(f) to provide that PICs employed by a part 121 or part 135 operator are excepted from compliance with the recency of experience requirements of § 61.57, only if they are qualified under §§ 121.437 or 135.243 and meet the recent experience requirements under §§ 121.439 or 135.247. Therefore, this exception in paragraph (f) will provide the relief suggested by the commenter.

NATA commented that ''approved course,'' as used in this section, should include ''those courses approved under part 141 and part 61.'' Several other commenters asked what is meant by ''approved course,'' and whether such a course is limited to takeoffs and landings.

The reference is to courses approved for training centers for establishing or maintaining currency in those tasks specified in this section. The content of such courses would not have to be restricted to takeoffs and landings. The courses might include, for example, different abnormal and emergency situations for takeoffs and landings, such as power loss, runway contamination, gusts and shear, factors causing visual illusion, physiological factors affecting night takeoffs and landings, and others. There is no such course approved under part 141 and, as discussed earlier under § 61.56, adding new courses to part 141 was not proposed and is not considered in this rulemaking.

AMR commented that the preamble suggests that a simulator or flight training device can be used to meet instrument currency requirements, but the regulation requires that at least 3 of the required 6 hours be conducted in an aircraft. It recommended clarification of this point.

The FAA agrees that there was an apparent conflict between the preamble to the NPRM and the rule text dealing with instrument currency. The rule text has been changed to reflect the intent of the preamble; paragraph (e)(1)(i)(A) has been changed to read, in part:

(A) Logged at least 6 hours of instrument time including at least six instrument approaches under actual or simulated instrument conditions, not more than 3 hours of which may be in approved simulation representing aircraft other than gliders.

The FAA proposed to revise this section to permit airmen, under certain conditions, to accomplish required PIC proficiency checks entirely in a qualified and approved flight simulator.

Proposed paragraph (a) provided that:

(a) Except as otherwise provided in this section, to serve as pilot in command of an aircraft that is type certificated for more than one required pilot crewmember, a person must—

(1) Within the preceding 12 calendar months, complete a pilot-in-command check in an aircraft that is type certificated for more than one required pilot crewmember; and

(2) Within the preceding 24 calendar months, complete a pilot-in-command check in the particular type of aircraft in which that person will serve as pilot in command.

NAFI, apparently commenting on § 61.58(a), commented that this section should be revised to close a loophole that allows certain large or turbojet aircraft, such as the DC–3 and some Cessna C–500 series aircraft, to be operated by a single pilot. It points out that, under the current and proposed sections, pilots of those aircraft may not be required to undertake the pilot proficiency checks.

While NAFI's comment may have merit, changing the applicability of § 61.58 is not the purpose of this rulemaking, and the FAA did not propose to change the tasks required for proficiency checks. As stated earlier, the purpose of this rulemaking is to encourage and accommodate the use of simulation for more training, testing, and checking tasks, but not to change the tasks required for any particular certificate, rating, or privilege.

Proposed § 61.58(e)(1) stated the following:

"Except as provided in paragraph (f) of this section, a check or a test described in paragraphs (d)(1) through (d)(4) of this section may be accomplished in a flight simulator qualified and approved under part 142 of this chapter subject to the following:

(1) Except as allowed in paragraphs (e)(2) and (e)(3) of this section, if an otherwise qualified and approved flight simulator used for a PIC proficiency check is not qualified and approved for a specific required maneuver—

(i) The training center shall annotate, in the applicant's training record, the maneuver or maneuvers omitted; and

(ii) Prior to acting as PIC, the pilot shall demonstrate proficiency in each omitted maneuver in an aircraft or flight simulator qualified and approved for each omitted maneuver."

Proposed § 61.58(e)(1) would have had the effect of requiring a flight simulator qualified as Level B or higher to satisfy the requirements of § 61.58, since only Level B or higher level flight simulators are qualified for landing.

FSI commented that exemptions have allowed successfully an alternative that permits the proficiency check to be accomplished in flight simulators not qualified for landing. That alternative requires the applicant to complete an approved curriculum, hold a type rating in the type aircraft for which the proficiency check is required, and have completed three takeoffs and three landings (one to a full stop) as the sole manipulator of the flight controls within the 90 days preceding the proficiency check.

The FAA agrees that the alternative is a current and acceptable practice. Therefore, paragraph 61.58(e) is reworded to include this alternative.

authorized by the Administrator to conduct the required check.

FSI commented that helicopter pilots should not be required to perform circling approaches to satisfy the requirement of this section because, in essence, a helicopter can land to a downwind hover, then make a hovering turn to make a landing to touchdown into the wind.

While this comment may have merit, the FAA did not propose to change the circling approach requirement. This rule considers what tasks may be accomplished by use of simulation, either now or in the future, but does not attempt to determine what tasks should be required for any particular certificate, rating, or privilege. Those tasks are being evaluated in a separate rulemaking project (phase II of the part 61, 141, and 143 review).

Airbus commented that § 61.58(e)(3) is not appropriate for training centers providing training for part 121 and part 135 certificate holders. It continues that an air carrier's operations specifications prohibit circling approaches unless the pilot is qualified to perform circling approaches, and that the approved training for a particular air carrier does not require training in circling approaches unless the employing air carrier is approved to conduct circling approaches. Airbus suggests that this paragraph be written to exclude applicants who are currently employed by a part 121 or part 135 certificate holder.

The FAA agrees in part with the commenter. The comment appears to pertain to proposed § 61.157 however. Therefore, the commenter's suggestion will be addressed in the preamble discussion pertaining to proposed § 61.157.

Section 61.58(f) proposed that, in order to accomplish the recurrent check entirely in a flight simulator, the pilot must have performed the 12-and-24-month proficiency checks in an aircraft, as described in § 61.58(a)(1) and (2).

FSI and Simuflite Training International (SFI) commented that the words "if an applicant for a check required by this section has not satisfactorily completed a PIC check within the period required by paragraph (a)(1) or (a)(2) . . ." that appear in proposed § 61.58(e) are essentially the same as the provisions contained in proposed paragraph (f) which reads as follows:

(f) If a pilot has not completed a pilot-in-command proficiency check within the period required by paragraph (a)(1) or (a)(2) of this section, that pilot must complete the required pilot-in-command proficiency check in an aircraft.

These commenters point out that both paragraphs would therefore preclude reestablishment of PIC proficiency by use of a simulator, which may be more restrictive than current exemptions.

The FAA agrees. It was not intended to propose that § 61.58(e) be made more restrictive than recent practice has allowed. Accordingly, § 61.58(e) has been reworded in the final rule. Paragraph (e) now reads as follows:

(e) A check or a test described in paragraphs (d)(1) through (d)(4) of this section may be accomplished in a flight simulator qualified and approved under part 142 of this chapter subject to the following:

(1) Except as allowed in paragraphs (e)(2) and (e)(3) of this section, if an otherwise qualified and approved flight simulator used for a pilot-in-command proficiency check is not qualified and approved for a specific required maneuver—

(i) The training center shall annotate, in the applicant's training record, the maneuver or maneuvers omitted; and

(ii) Prior to acting as pilot in command, the pilot shall demonstrate proficiency in each omitted maneuver in an aircraft or flight simulator qualified and approved for each omitted maneuver.

(2) If the flight simulator used pursuant to this paragraph is not qualified and approved for circling approaches—

(ii) Have completed, within the preceding 90 days, at least three takeoffs and three landings (one to a full stop) as the sole manipulator of the flight controls in the type airplane for which the pilot-in-command proficiency check is sought.

In an apparent reference to proposed paragraph (g), which required a pilot's first PIC proficiency check to be accomplished in an aircraft, FSI commented that it believes that part 142 will have the same supervision and scrutiny required of training programs currently conducted under part 121, and that even the first proficiency check should be allowed in a flight simulator, as currently permitted under § 121.439 (sic). (Apparently the commenter was referring to § 121.441.)

The FAA has considered the comment in the overall context of increasing the use of simulation in lieu of checking in an aircraft. The inclusion of a certificate limitation, as described in the discussion of §§ 61.64 and 61.158, requiring SOE for certain less experienced pilots, will assure that pilots first due a PIC proficiency check in a specific type aircraft will have had some aircraft experience. Accordingly, after further consideration, the FAA has concluded that proposed paragraph (g) is unnecessary and it has not been adopted.

Proposed paragraph (i) stated the following:

"(i) If a pilot takes the check required by this section in the calendar month before, or the calendar month after, the month in which it is due, the pilot is considered to have taken it when due, and future proficiency check due dates do not change."

AMR commented, "The proposed paragraph 61.58(i) leaves open the same questions that the existing language in parts 61.58(g) and 135.301(a) leave open. The proposed paragraph establishes a base month, and a 90-day window for checking." AMR continues that there are any number of good reasons why a pilot may not get the check required by this section within the specified time period, and that the proposed language does not address the case of a pilot whose currency has lapsed. It recommends that the period for checking be extended to include the period from the month before the month a check is due until 2 months after the month a check is due. It further recommends that another subparagraph be added to specify that, for those pilots who do not complete a proficiency check during the period due, a new 12-month period for proficiency check due dates will begin upon completion of the proficiency check.

The FAA does not agree that extending the acceptable time period for completion of a proficiency check for 2 months beyond the due date, and allowing a total window of 4 months for an annual proficiency check, is warranted. Safety dictates that a pilot's proficiency be checked regularly and with some degree of frequency. The FAA has found it acceptable to conduct annual proficiency checks. The scenario described by the commenter would allow annual proficiency checks to become 14-month proficiency checks.

The FAA does not agree that a new provision is necessary for pilots whose currency has lapsed. Paragraph (a) speaks to such a situation in that the pilot must be able to look back over the current month and the preceding 12 months or 24 months and find that he or she has completed the required check.

AIA and Boeing commented that this section should not contain new flight training device definitions.

Flight training device definitions are contained in § 61.1a, and the rationale for adding those definitions is provided in the discussion of that section.

As discussed above, the FAA has revised proposed paragraph (e) and deleted proposed paragraphs (f), (g) and (i), and redesignated remaining paragraphs accordingly. This section is adopted with the changes discussed.

completion of a part 121 or part 135 approved training program. The detailed testing guidelines are contained in FAA *Practical Test Standards*. More discussion on PTS follows in subsequent paragraphs, and under the analysis of comments about proposed § 61.158 and appendix A of part 61).

Several commenters, including TWA, said that the phrase, "(for parts 121 and 135 use only)" is confusing, and that the FAA should "enforce one, and only one, set of standards for an ATP certificate." Crew Systems said that the proposals appear to create two types of pilot certificates, one for part 121 and part 135 operations and one for all other operations.

The FAA has but one set of standards for the ATP certificate, or for any other certificate. Section 61.63 and § 61.64 are written differently to articulate the different procedures for gaining added ratings, including an added rating to the ATP certificate. Neither section addresses standards for the application of the ATP certificate. Part 61 has for years listed, under several paragraphs entitled "Flight proficiency", broad areas of operations in which each applicant must demonstrate competence to be awarded any airman's certificate except for the ATP certificate. For the last several years, the specific tasks appropriate for an applicant for any certificate or rating, the conditions under which the tasks are to be performed, and the standards for each task have been published in PTS.

Additionally, the FAA points out that there are now and have been for many years at least two different ways to gain an ATP certificate, or ratings to that certificate, or both. The certificate and ratings may be earned pursuant to the successful completion of an air carrier training program or by meeting the requirements of § 61.63 or § 61.157 outside an air carrier training program. Sections 61.63 and 61.64 recognize the different ways to gain added ratings, and address the use of simulation for each of those ways.

AIA, Boeing, and AMR commented about this section (and § 61.64) in general. They stated that these sections are redundant, and that the requirements for a type rating or an ATP should be the same regardless of the employment status of the airman concerned.

NATA commented that there was insufficient basis for the formation of what amounts to two types of ATP certificates, and that the certification standards for additional ratings should be the same regardless of employment. These comments were similar to several others.

To clear some confusion apparently held by the commenters referenced in the previous paragraph, the FAA points out that § 61.63 (and new § 61.64) set forth the proposed requirements that would have to be met to add all additional ratings to airman certificates other than the ATP certificate, but not the requirements for the ATP certificate nor added ratings to that certificate.

As stated earlier in the discussion of this section, the FAA agrees that there is only one standard for any added rating. The commenters have observed that there have been two different sets of certification requirements (but not standards) for an added rating to the ATP certificate. One requirement is the PTS, which requires all applicants who are not applying by virtue of having successfully completed an employing air carrier training program to complete all listed tasks. Another requirement, appendix A of part 61, allows waiver of training, testing, and checking of tasks that are excluded by an air carrier's operations specifications for those applicants who are applying by virtue of having successfully completed an employing air carrier training program.

Airbus commented that proposed § 61.63 this section inadvertently imposes an unnecessary economic burden on training centers of aircraft manufacturers which manufacture airplanes to meet the standards of part 25. It states that this section proposed § 61.63 should be applicable to FAA inspectors and employees of a manufacturer training center, along with aircrew employees of a part 121 or part 135 certificate holder.

The FAA does not see a different economic impact as a result of applying the alternatives of this section, instead of § 61.64, to individuals who are not aircrew employees of a part 121 or part 135 certificate holder. The persons mentioned by the commenter have always been required to complete

The FAA proposed in paragraphs (b)(1) and (c)(1) of this section that an applicant who holds a pilot certificate and applies to add a category or class rating must present a record of training certified by an authorized flight instructor showing that the applicant has accomplished certain training. Paragraph (d)(1) proposed that an applicant who holds a pilot certificate and applies to add a type rating must present a record of training certified by an authorized ground or flight instructor showing that the applicant has accomplished certain training.

In addition to the comments on this section already addressed in the discussion relating to proposed § 61.63, FSI commented that the wording of proposed §§ 61.64(b)(1), (c)(1), and (d)(1) be changed to delete the words "flight" and "ground" wherever they appear before the word "instructor." In essence, it says that, as proposed, this section would not allow authorized instructors, who do not hold flight instructor certificates, to certify flight training accomplished in simulation. It states that this practice already is permitted under existing exemptions.

The FAA agrees. Accordingly, the final rule incorporates the revisions suggested by FSI.

Paragraph (e) proposed the following:

"(e) The tasks required by paragraphs (b), (c), and (d) of this section shall be performed in—

(1) An airplane of the same type, for which the type rating is sought; or

(2) Subject to the limitations of paragraph (e)(3) of this section, a flight simulator or a flight training device that represents the airplane type for which the type rating is sought.

(3) The flight simulator or flight training device use permitted by paragraph (e)(2) of this section shall be conducted in accordance with an approved course at a training center certificated under part 142 of this chapter; or

(4) In another manner approved by the Administrator."

STI asked, "What could be a possible (sic) another manner approved by the Administrator?" It asked if the intent is to allow current part 61 exemption holders to submit a program outside of a part 142 certificated training center. STI believes that to do so would allow organizations to offer additional type ratings without a part 142 certificate, and that would negate "the level playing field for all operators subject to part 142 certification."

The new rule will allow current part 61 exemption-holding simulator training centers to continue to operate only if they obtain a part 142 certificate. The phrase in question was intended to allow for approval of unforeseen circumstances for completing the tasks required to obtain a part 142 certificate without changing the rule. The FAA has determined, therefore, that proposed paragraph (e)(4) can be withdrawn and has renumbered several paragraphs accordingly.

In a general comment concerning actual aircraft flight experience, the NTSB stated the following:

"The Safety Board realizes that there are limitations to simulation and believes that the proposed regulations must be sensitive to the safety needs served by retaining some aspects of actual flight experience."

The NTSB continued:

"The Safety Board recognizes that experience in . . . training devices cannot fully replicate operational experience in the actual flight environment and the "seasoning" that such experience provides . . . . The Safety Board urges the FAA to review the proposed regulations to ensure that they achieve the intent while still safeguarding basic pilot and instructor skills provided by the physical operating environment."

environment, including interaction with other aircraft, which makes them a safer pilot. This is especially important early in a pilot's learning experience.''

ALPA added: ''For these reasons, caution should be exercised in relying too heavily on simulator training in a pilot's early training and experience,'' and ''A pilot who is a candidate for an ATP has likely flown for a commercial operator for several years. . . .''

The FAA agrees with the commenters' analysis of the importance of actual aircraft experience when an applicant will use flight simulation for a large portion of required training and testing. The FAA has had, for years, mechanisms for part 121 air carriers and for part 91 and part 125 operators to ensure the flying public that PIC's have actual aircraft experience prior to acting as PIC for aircraft requiring a type rating. Part 121 has a requirement for a potential PIC to receive specified initial operating experience (commonly known as IOE, required by § 121.434) under the supervision of a check pilot. This operating experience requirement applies only to the ATP certificate.

Notwithstanding the recency of experience requirement of § 61.57, experienced pilots who operate under part 91 or under part 125 have no further operating experience requirement. Relatively inexperienced pilots who intend to operate under part 91 or under part 125 and who gained an airman certificate with a type rating or added a type rating to any level of airman certificate entirely by training and testing in a flight simulator have had a limitation placed on their airman certificate requiring operating experience similar to that required by § 121.434. The terms of exemptions permitting these pilots to train and test entirely in flight simulators defined the experience level thresholds and set the requirements for SOE. The SOE requirement applies to any level of airman certificate. The SOE requirement applies only to a pilot who is to act as PIC for the first time in a particular type aircraft, and may be completed under the supervision of another qualified and current PIC.

In light of its long-standing requirements for operating experience for new PIC's of aircraft requiring a type rating and to implement the NTSB recommendations and those of other commenters, the FAA is convinced that, in the interest of safety, it is essential to continue requirements for sufficient operating experience before newly certificated or rated pilots act as PIC's of aircraft requiring a type rating.

For the reasons discussed in the preceding paragraphs, the FAA has added new paragraphs (e)(4) through (e)(12) specifying SOE requirements for certain less experienced pilots who apply for an additional rating. These revisions are fully responsive to the NTSB's and ALPA's comments. They reflect current FAA practice with limitations contained in exemptions or placed directly on pilot certificates or ratings obtained through simulation.

With the exception of the revisions discussed above, § 61.64 is adopted as proposed.

§ 61.65 Instrument Rating Requirements

The FAA proposed in paragraph (c)(3) of this section, that an applicant for an instrument rating would have to have received instruction in instrument approaches using two different nonprecision approach systems and one precision approach system. Paragraph (g)(3)(i) proposed that the practical test for the instrument rating must include at least one published precision, nonprecision, and circling approach. Previously, this section had listed specific types of precision and nonprecision instrument approaches that an applicant had to receive instruction for, and had to satisfactorily accomplish, during practical testing.

One commenter said that this section should continue to list specific non-precision and precision approaches that an applicant must train for and show competence in, instead of changing to the generic description, as proposed.

The FAA believes that this change will help keep the rule from being or becoming obsolete and will provide relief to some applicants. With ever-changing technology, some instrument approaches may become obsolete in a few years. New instrument approaches have been added since the current rule was written, and other new ones are certain to be added.

approved part 142 course.

Andrews University asked why the increase in credit, and why part 141 pilot schools could not also have an increase to 30 hours.

AMR Combs (AMR), an affiliate of American Airlines, and NATA commented that the proposals for certain reductions in aeronautical experience or instructional hours for the instrument rating conducted at a part 142 training center place part 141 pilot schools at a competitive disadvantage. They recommended that the FAA grant similar authority to part 141 schools that have approved flight simulators or flight training devices.

Jeppesen-Sanderson commented that if a reduction of required hours from 125 hours of pilot flying time to 95 hours is valid for part 142 then it is valid for part 141.

Another commenter said that the proposed reduction of pilot flying time to 95 hours under proposed paragraph (h)(i) does not do justice to the level of exposure a person should have to operate safely in the IFR environment. The commenter continues that he can attest to the difficulties encountered when experience requirements were reduced from 200 to 125 hours. The commenter believes that the level of skill required of the single-pilot IFR operation is the most demanding in aviation. The commenter states that the rigid oversight proposed for part 142 is commendable, but inadequate to compensate for the lack of experience.

The FAA believes that the proposed changes discussed above are justified based on innovative training concepts that will be a feature of part 142 training centers. The reasons for the creation of a new training entity and assigning specific authorities and privileges to it are discussed under a previous section in this document entitled "Discussion of the Amendments and the New Rule."

While part 141 allows the use of ground trainers, except for part 121 and part 135 certificate holders training their own aircrews, under this final rule, all flight simulator training, testing, and checking for which an airman is to receive credit to satisfy any requirement of 14 CFR must be accomplished in part 142 training centers. These training centers will be subject to more stringent training program requirements than part 141 pilot schools. Part 142 training centers will be substantially more sophisticated than schools certificated under part 141 by virtue of the use of the most advanced levels of flight simulation. They will have considerably more detailed and structured training programs, their instructors will be subject to more demanding qualifications, and they will have more interaction with potential air carrier clients than part 141 pilot schools have.

Experience has shown that there is a greater efficacy in more structured training using high fidelity simulation than in traditional aircraft-only or aircraft and complementary flight training device training such as provided by a part 141 pilot school. At present, under § 141.41, a part 141 pilot school may use a flight simulator only to the extent that a flight training device may be used. The requirements for the part 142 certificate are discussed in more detail in the applicable section-by-section discussion.

In response to the comment about placing part 141 pilot schools at an economic disadvantage, the FAA believes that the considerations discussed above justify the treatment afforded part 142 training centers. For the reasons discussed, the aeronautical experience requirements for the instrument rating can be reduced as proposed; all other proposals discussed above also are adopted in the final rule.

§ 61.67 Category II Pilot Authorization Requirements

The FAA proposed in paragraph (c)(4) of this section that the practical test for this authorization include approaches that need not be conducted down to the alert height or decision height, as applicable, authorized for Category II operations but only if the approaches are conducted in a flight simulator or flight training device. This section applies only to ILS approaches, since Category II applies only to ILS approaches by definition.

The FAA agrees that alert height is a term not normally applicable to Category II operations, and the term is deleted in the final rule.

The FAA stated in paragraph (d)(3) of this proposed section that oral questioning could be conducted at any time during the flight increment of the practical test.

One commenter stated that oral questioning must never be allowed during the operation of an aircraft. He states that the demands placed on an applicant being tested are great enough without the applicant having to interrupt a train of thought to answer a question.

The FAA agrees that an applicant should not be carelessly questioned during the conduct of a practical test. Routine questions that can be effectively conducted in an interview situation while on the ground should and will be conducted on the ground to the maximum extent possible. However, the FAA believes that it is in the interest of safety to allow evaluators to conduct limited oral questioning during the practical test. The FAA needs to be able to determine that an applicant is capable of recognizing and responding to outside questions, statements, or directions. A verbal warning from air traffic control (ATC) or another crewmember, an ATC inquiry about the status of flight progress or windshear encounter, report of a windshear, traffic, or other hazard to landing are examples of outside questions or interruptions that a crewmember must be able to cope with and respond to in the interest of safety. An effective method to determine that an applicant can cope with these examples and all the requirements of a practical test is to allow the person conducting the practical test to insert realistic distractions or to make simulated instructions or warnings to an applicant during the actual conduct of practical tests.

The FAA has determined that the duration of this authorization should remain in § 61.21. Accordingly, proposed paragraph (e) is not adopted.

For the reasons discussed above, this paragraph is adopted as proposed except for the changes discussed, minor typographical corrections, and deletion of the term "alert height."

§ 61.68 Category III Pilot Authorization Requirements

This new proposed section sets forth the requirements for a pilot to conduct Category III operations. Several part 121 certificate holders commented that the section should be amended to include the authority for part 121 and part 135 certificate holders to conduct the authorization practical test pursuant to their approved training programs.

The FAA agrees that part 121 and part 135 certificate holders should be authorized to conduct the practical test pursuant to their approved training programs. A new § 61.3(j) is adopted by this final rule to permit this practice.

The FAA stated in paragraph (e)(4) of this proposed section that oral questioning could be conducted at any time during the flight increment of the practical test.

Boeing and AIA commented that paragraph (e)(4) should be amended to clarify that the oral increment and flight increment do not occur simultaneously.

The FAA agrees that the two increments should be separate to the extent possible, but believes that the authority of inspectors and examiners to ask clarifying questions during the flight increment as and if necessary should be stated in the rule. See the discussion of oral questioning during the flight increment of the practical test in the analysis of § 61.67. Therefore, paragraph (e)(4) is adopted as proposed.

Crew Systems commented that inclusion of Category III pilot authorization provisions in this rulemaking is inappropriate, for such provisions do not relate to the purpose of the rulemaking—the certification of training centers.

One objective of this rulemaking is to facilitate the use of simulation and to cause growth in that industry. One task that flight simulators are being used for now, and almost certainly will be more

non-mandatory advice only for a means, but not the only means, to accomplish certain actions. The information in this section is similar to the regulatory language concerning Category II approach authorization, contained, for many years, in § 61.67.

The FAA has determined that the duration of this authorization should remain in § 61.21. Accordingly, proposed paragraph (f) is not adopted. With this change, this section is adopted as proposed.

§ 61.109 Airplane Rating: Aeronautical Experience

The FAA proposed to allow credit for instruction received in approved flight simulators and approved flight training devices in this section. The FAA previously required 20 hours of flight instruction, and all of that instruction must have been received in an airplane.

Under this proposed section, a maximum of 2.5 hours of flight simulator or flight training device instruction from an authorized instructor is creditable toward the 20 hours of flight instruction required for a private pilot certificate, whether or not that instruction is accomplished in a training center certificated under part 142. The 2.5 hours of instruction time may be increased to 5 hours of instruction in a flight simulator or flight training device, provided the instruction is accomplished in an approved course conducted by a training center certificated under part 142.

The flight instruction received in a flight simulator or flight training device must be accomplished in a flight simulator or flight training device representing an airplane.

Previously, § 61.109 required at least 40 hours of flight instruction and solo flight time. Under this proposed section, the 40 hours of aeronautical experience may be reduced to 35 hours provided that the entire private pilot curriculum is accomplished under an approved part 142 course.

The 35 hours of aeronautical experience may be further reduced under paragraph (i) of this section if the applicant completes an approved private pilot course and if the Administrator determines that a further reduction is appropriate based on a demonstration of training program effectiveness that warrants testing such a reduction. Under this exception, a training center might propose a test training curriculum the effectiveness of which might be validated by reference to post-training data covering at least 1 year of student performance before such a reduction could be considered for other students.

Andrews University commented that it agrees with this proposed section.

The Japanese Civil Aviation Bureau commented that the reduced aeronautical experience requirements of this section and §§ 61.113, 61.129, and 61.131 may have an impact on Convention on International Civil Aviation (ICAO) agreements, in that students meeting reduced aeronautical experience requirements may not meet ICAO member states' requirements for certificates based on a U.S. certificate.

The FAA points out that the reduced aeronautical experience requirements authorized for part 142 training centers are the same as the reduced aeronautical requirements that have been authorized for part 141 pilot schools for many years. Therefore, certificates and ratings issued under part 142 would have the same ICAO member states' acceptance as certificates and ratings issued under part 141. The provision of paragraph (i), which might allow a particular course with fewer hours of aeronautical experience than otherwise specified in this section, might lead to a limitation on an airman's certificate that is similar to the limitation specified in § 61.111(c) and in several other sections in this part.

ALPA commented that the preamble discussion of paragraph (i) of this section, and similar paragraphs contained in other proposed sections, includes vague statements of data that a training center would have to track to validate its ability to train effectively in fewer than the minimum number of hours specified in each proposed section.

The FAA agrees that the few terms offered as examples are not elaborately discussed. The intention is to allow maximum flexibility to a training center to develop, at some future date, innovative curriculums that might adequately train for a specific certificate or rating in fewer than the current minimum number

ALPA also commented that 1 year of data collection is an inadequate period to collect data from which to draw conclusions used to validate the effectiveness of training students in fewer than the minimum number of hours set forth in the proposed rule. In support of this comment, it stated that accident and incident rates are difficult to quantify for even 10-year periods.

The FAA points out that accidents and incidents are just examples of pilot performance that may be tracked, and are not meant to be the only items tracked. The FAA believes that it is in the public interest, and safe, to allow a reduction if data collected and evaluated justify such a reduction. If the performance data do not clearly justify the reduction, none will be undertaken. If, after a test is undertaken, the FAA determines that the performance of the pilots in the test group is below standard, the FAA will modify the validation data collection period or any other control measure that may be indicated.

AMR commented that part 141 pilot schools would be at a disadvantage in that, unlike training centers, they would not be permitted to reduce the number of hours of aeronautical experience as proposed in this and similar sections. It recommends that pilot schools be allowed the same opportunity if the pilot school has approved flight simulators or flight training devices.

The minimum number of hours of aeronautical experience proposed in the NPRM for purposes of part 142 is the same aeronautical experience required under part 141 for several years. The potential for an even further reduction is extended to part 142 training centers only, because the FAA is convinced that further reduction would be possible at this time only under the more sophisticated training environment required of these schools.

AMR also commented that in the training environment it is relatively normal for a student to have more than one instructor during a course of instruction. Proposed § 61.109(a), it points out, speaks of a singular instructor, as does the existing regulation. To better reflect the training center environment, and to avoid the implication that a trainee must have one and only one instructor, it recommends that the proposed language be changed to say "flight instruction from an authorized instructor or instructors."

The FAA agrees that students are likely to have more than one instructor, and it does not intend to prohibit this practice. The term "authorized instructor" as used throughout this final rule is intended to mean that instruction may be received from one instructor or from more than one instructor. The interpretive rules in 14 CFR part 1 state that words importing the singular include the plural, and that words importing the plural include the singular.

Therefore, for the reasons stated, this section is adopted as proposed.

§ 61.113 Rotorcraft Rating: Aeronautical Experience

Under current § 61.113, an applicant for a private pilot certificate with a rotorcraft category rating must have at least 40 hours of flight instruction and solo flight time in aircraft. Instruction in flight simulators or flight training devices is not authorized. The FAA proposed in paragraph (a)(1) of this section that the 40 hours of flight instruction and solo flight time must include at least 20 hours of flight instruction from an authorized flight instructor.

AMR made substantially the same comment that it made about proposed § 61.109 about a student having more than one instructor. See that section for the FAA response.

With minor revisions to its format and structure, this section is adopted as proposed.

§ 61.129 Airplane Rating: Aeronautical Experience

Under proposed § 61.129(b), an applicant for a commercial pilot certificate with an airplane rating would have to have at least 250 hours of flight time as a pilot, which could include not more than 50 hours of instruction in a ground trainer acceptable to the Administrator.

Under proposed § 61.129(b)(1)(ii), up to 100 hours of flight simulator instruction or flight training device instruction could be credited toward the 250 hours of total flight time if the instruction is accom-

in accordance with a training program approved under part 142, part 121, or part 135.

NATA commented that this section should be left unchanged.

Jeppesen-Sanderson commented that an approved part 142 commercial course would allow all training, including cross-country experience, to be conducted in a flight simulator or flight training device, and that ". . . it is impractical to conduct the entire commercial training program in a simulator or flight training device."

In fact, the proposed rule would not affect the current requirement pertaining to cross country flights, and it proposed that a maximum of 100 hours of the total of 190 hours of aeronautical experience may be accomplished in a flight simulator under part 142. The justification for permitting up to 100 hours of training to be accomplished in a flight simulator may be found in the discussion of comments to § 61.65 and in the section of this document entitled "Discussion of the Amendments and the New Rule."

The FAA has decided to omit the words "Approved commercial pilot training program conducted under part 142" from the title of paragraph (c). Paragraphs within a section do not normally have titles. With this change, this section is adopted as proposed.

§ 61.131 Rotorcraft Rating: Aeronautical Experience

Under current § 61.131, an applicant for a commercial pilot certificate with a rotorcraft category rating must have at least 150 hours of flight time, including at least 100 hours in powered aircraft, 50 hours of which must have been in a helicopter.

Under the proposed revision to this section, the applicant may obtain 35 hours of credit toward total flight time requirement in a flight simulator or flight training device, or a credit of up to 50 hours of the total required flight time in a flight simulator or flight training device if the flight simulator time or flight training device time is obtained from a training center certificated part 142. Previously, there was no provision for crediting flight simulation time toward this rating. Under the proposed rule, to be credited toward the total 150-hour flight time requirement, flight simulator or flight training device instruction received would have to be accomplished in a flight simulator or flight training device representing a rotorcraft.

A provision to allow a further reduction of the 150-hour flight time requirement, based on demonstrated ability to accomplish training requirements in less time, was also proposed.

AMR commented that the ratio of dual time to solo time is out of balance, and that each of those categories of aeronautical experience should be adjusted.

The ratio of dual to solo aeronautical experience is not appropriate to consider in this rule, which is aimed at increased use of simulation. The NPRM did not propose any changes to either solo or dual flight time requirements.

With minor typographical changes, this section is adopted as proposed.

§ 61.155 Airplane Rating: Aeronautical Experience

The FAA proposed to amend this section to allow more credit for the use of simulation toward the total required aeronautical experience requirement for an airplane rating on an ATP certificate.

Under existing § 61.155(b)(2), an applicant for an ATP certificate with an airplane rating must have had at least 1,500 hours of flight time as a pilot, including, among other things, at least 75 hours of actual or simulated instrument time, at least 50 hours of which were in actual flight. Up to 25 hours could have been obtained in a simulator.

experience. However, in response to comments, paragraph (a)(3), as adopted, allows not more than 100 hours of **total** simulated pilot experience to be credited toward the total requirement for this certificate. This recognizes that those 100 hours could already be a part of time accumulated in obtaining a commercial pilot certificate.

NATA and ATA commented, in a comment similar to that of several of its member organizations, that the proposal permitting increased amounts of simulated flight time to be credited as aeronautical experience should be extended to part 121 and part 135 certificate holders, and to holders of AQP authorization.

It was not the purpose of this rulemaking to extend increased training credits to holders of certificates issued under part 121 or part 135. However, any curriculum can be organized for presentation under principles described by AQP, presented to the FAA for approval and, upon approval, presented to aircrew employees of the authorization holder or, if the authorization holder also holds a part 142 certificate, to any other person.

Boeing commented that this proposed section is not applicable to foreign pilots and military pilots.

The provisions of this proposed section, however, do apply to military pilots and foreign pilots.

This proposed section is adopted with the changes described above.

§ 61.157 Airplane Rating: Aeronautical Skill (For Parts 121 and 135 Use Only)

The FAA proposed to revise this section title to make it clear that it is applicable only to applicants for an ATP certificate (with an airplane rating) who are pilot crewmember employees of a part 121 or part 135 certificate holder applying pursuant to that employer's approved training program. The FAA proposed a new § 61.158 that applies to other applicants, as discussed under the next heading.

Numerous comments were received concerning this section. In addition to the persons commenting on proposed § 61.63, which concerns a similar subject, American Airlines (American), Delta, and FSI commented on this section. The comments were substantially the same as the comments regarding proposed § 61.63.

See the response to comments concerning proposed § 61.63 for a discussion of the reasons for reserving § 61.63 for part 121 and part 135 use. The same rationale applies to this proposed section.

The FAA will continue the practice of allowing waiver of certain maneuvers, on an individual basis, as currently provided in appendix A of part 61 and the PTS, for those persons who have successfully completed an employing air carrier's approved training program for the type airplane involved within the preceding 6 calendar months. The waiver authority will apply only to applicants whose employer does not have the procedure authorized in the operations specifications, for example, circling approaches authorized by operations specifications. The waiver authority will not apply to all persons who are employed by an air carrier simply because of that person's employment.

The FAA restructured proposed paragraph (a) to better conform to proper outline and grammatical construction. The subject matter of proposed paragraph (a)(2) is better placed in existing paragraph (c). However, in the final rule, the FAA has determined that only paragraph (g) should be added and therefore has withdrawn proposed paragraphs (a) and (c).

The FAA has, for years, received questions about whether completion of a proficiency check taken under part 121 or part 135 would suffice for the certification requirements of this section. The FAA has maintained a policy that the proficiency checks in question suffice to meet the certification requirements of this section. To make that position clear, the FAA has added a new paragraph (g) to this proposed section.

This section is adopted with the changes discussed.

(1) An airplane of the same class, and, if applicable, an airplane of the same type, for which the class rating or type rating is sought; or

(2) Subject to the limitations of paragraph (c)(3) of this section, a flight simulator or a flight training device that represents the airplane type for which the type rating is sought, or set of airplanes if the airplane for which the class rating is sought does not require a type rating.

(3) The flight simulator or flight training device use permitted by paragraph (c)(2) of this section shall be conducted in accordance with an approved course at a training center certificated under part 142 of this chapter; or

(4) In another manner approved by the Administrator.''

STI asked, in essence, whether paragraph (c)(4) is intended to allow current part 61 simulator exemption holders to submit a training program for FAA approval without first obtaining certification under part 142.

This is the same question that STI asked concerning proposed § 61.64. Proposed paragraph (c)(4) is withdrawn for the same reasons stated in the response to the comment regarding proposed § 61.64, and subsequent subparagraphs have been added to include the requirements for SOE for certain pilots who train and test for added ratings predominately or entirely by flight simulation.

Several other commenters stated that the FAA appears to be proposing two different standards for the ATP certificate or added ratings to that certificate, one standard applicable to applicants who will conduct air carrier operations and a second standard for applicants who will conduct other than air carrier operations. See § 61.64 for the FAA response to comments made by the NTSB and ALPA that applies also to this section.

An editorial change was made to paragraph (a)(1) of this section to make the titles of the areas of operation exactly match the table of contents for those areas of operation in PTS ''FAA–S–8081–5.'' Editorial changes were made to paragraph (2) to make it clear that that paragraph applies only to additional airplane ratings. Additionally, although no comments were received about these proposals, the FAA has withdrawn proposed paragraph (2)(iii) and (iv) of this section given that they cover issues not germane to the objectives of this final rule.

A few part 121 certificate holders asked if proposed § 61.158 would apply if a type rating is sought from a trainer other than one's own employer.

As proposed, this section would apply to all applicants, who are not aircrew employees of a certificate holder, being trained in accordance with the requirements of subpart N of part 121 or subpart H of part 135, as applicable.

Andrews University asked what minimum level of flight simulator or flight training device would be required by proposed paragraph (c)(2) to conduct a practical test.

As discussed elsewhere throughout the proposal, the simulation medium, in addition to the requirements set forth under proposed paragraph (c)(2), must be qualified and approved for each maneuver, procedure, and crewmember function for which a training center proposes to use that simulation medium. The qualification standards are listed in AC 120–40, as amended, and AC 120–45, as amended, as applicable. In addition to the guidance contained in these AC's, the FAA is preparing a new AC 120–46, mentioned earlier in the discussion under § 61.1, which will assist training center certificate applicants by presenting a matrix showing the level of simulation that is approved for various maneuvers, procedures, and crewmember functions. The availability of that AC will be announced separately.

This proposed section is adopted with the changes discussed in the preceding paragraphs.

hours if accomplished under part 121, part 135, or part 141 if accomplished pursuant to an AQP authorization.

The FAA does not agree that it is appropriate to increase simulated flight time as recommended by this commenter. See the section-by-section discussion under § 61.65 and the section of this preamble entitled "Discussion of the Amendments and the New Rule" for the rationale behind FAA's position on this issue.

For the reasons discussed above, this section is adopted as proposed.

§ 61.163 Rotorcraft Rating: Aeronautical Skill

The FAA proposed to revise this section to allow an airman to complete the practical test for a helicopter rating in a flight simulator or flight training device if the practical test is taken as a part of a curriculum at a training center certificated under part 142.

FSI asked if it is an oversight that this section does not contain some of the same proposed paragraphs that are contained in proposed § 61.158, which is the parallel section for airplane ratings.

It is not an oversight that this section does not exactly parallel § 61.158. The proposals that FSI questions contain provisions that would require an applicant to present a record of having received ground training and flight training on specified subjects, and to have been shown competent in specified areas of aeronautical knowledge.

Proposed § 61.158(a)(2)(iii) and (iv), which are the two paragraphs the commenter suggested that the FAA parallel in this section, have been withdrawn from § 61.158 in this final rule as issues not germane to the objectives of this rulemaking. The FAA did not propose similar provisions in proposed § 61.163. Therefore, it is inappropriate to consider this comment at this time. The comment will be considered if such proposals are made in the future for rotorcraft ratings.

FSI also recommended that the proposed areas of operations listed in § 61.163(a) be titled and reordered to be consistent with the table of contents contained in "Airline Transport Pilot and Type Rating," (PTS FAA–S–8081–5).

The FAA has changed the listing of areas of operation as suggested.

In response to the comments addressed in the discussion of § 61.158 and for the reasons stated there, the FAA has placed additional paragraphs in this section concerning added ratings obtained substantially or entirely in flight simulation.

This section is adopted as amended.

§ 61.169 Instruction in Air Transportation Service

This proposed section would require that ATP's giving instruction in Category II or Category III operations be trained and tested in Category II or Category III operations, as applicable.

Paragraph (a)(3) proposed that all instruction provided by ATP certificate holders be conducted in aircraft with functioning dual controls.

BAe, in a comment similar to several others, commented that proposed paragraph (a)(3) would allow an ATP to instruct only in aircraft with functioning dual controls, not in flight simulators or flight training devices.

Although the FAA did not specifically include simulation in this proposed section, the intent of this rulemaking is to provide for increased use of simulation wherever practical and where safety permits. Therefore, the FAA agrees that this paragraph should be revised to clarify that privileges of an ATP while instructing in air transportation service includes instruction in a flight simulator or flight training device. A new paragraph (a)(2) has been added accordingly.

instruction would not have been permitted by the proposal. However, the FAA believes that, with the proposal to allow simulator instruction, the FAA believes that duty time limitations should apply to both simulation and aircraft.

Further, flight instruction time limitations regarding preflight and post flight activities or briefings and debriefings have never been addressed. The FAA has determined that, in this final rule, it is appropriate to clarify that time spent performing these activities does not count toward the proposed flight instruction time limitations. Therefore, the words "excluding briefings and debriefings" have been added to paragraph (b) of this section in the final rule.

AMR commented that, by proposing time limitations, the FAA is mandating work rules, and that the FAA does not provide any justification for the arbitrary limitations imposed.

The proposed time limitations are not new; they have been contained in current § 61.169 for many years. The clarification to paragraph (b) discussed above should remove any confusion about not establishing new instructor duty times for simulation instruction.

SFI commented that this rule is archaic and attaches a privilege (instructing) to a certificate that demands neither training nor a demonstration of skill as an instructor. It continues that the rules applicable to instruction in air transportation service should be contained in part 61 and that specialized requirements for air transportation instructors should be contained in §§ 121.411 and 135.337, as appropriate.

In addition to holding an ATP certificate, persons who instruct in air transportation service in part 121 and part 135 must train, and in implementing guidance requirements as an instructor and demonstrate skill as an instructor, for the specialized application of air transportation service. The FAA is convinced that these requirements assure a level of safety for instruction equivalent to provisions of part 61, for privileges limited to air transportation service.

This section is adopted with the changes discussed above.

§ 61.187 Flight Proficiency

As proposed, this section would permit an applicant for the flight instructor certificate to receive the required instruction for a flight instructor certificate in a flight simulator or flight training device used as part of an approved course conducted by a training center certificated under part 142. Previously, there was no provision for accomplishing the required instruction in anything other than an aircraft.

An overwhelming number of comments favored expansion of simulation to authorize its use for part or all of the instruction that flight instructor applicants are required to receive. Commenters objected, however, to the apparent requirement that all instruction must be received in an approved part 142 training center course. Several commenters, responding to the NPRM, suggested that the instruction permitted by this section be permitted for air carriers, part 141 schools, and holders of AQP or other authorizations.

The FAA does not agree. This option has been considered in detail in previous discussion of comments on §§ 61.56, 61.57, and 61.155.

Jeppesen-Sanderson, and other organizations representing part 141 and part 61 pilot schools commented, also in response to the NPRM, that a flight simulator could not do all the tasks in which a flight instructor must demonstrate competence.

The FAA agrees that this comment is true. The reason for extending the permitted uses for simulation to training and testing for the flight instructor certificate, even though simulation will not currently perform all the requisite tasks for that training and testing, is the same as discussed in the section-by-section discussion of § 61.56, regarding future use of simulators.

A wording error in NPRM Notice 92–10 resulted in the proposed rule text saying that an applicant for a flight instructor certificate **must** have received instruction in accordance with an approved course at a training center certificated under part 142; the intention was to say an applicant **may** receive instruction in such a course. Therefore, the FAA announced in an SNPRM (FR 58 9514, February 19, 1993) that

The FAA believes that there are potentially significant cost benefits for all persons involved in aviation training, including individuals who may choose to use a training center for flight instructor training whenever it becomes available.

In addition, the FAA has determined that allowing the training and testing for a flight instructor certificate would result in additional safety benefits if accomplished in a simulator rather than in an aircraft.

After further analysis, the FAA believes that paragraphs (c)(2) and (c)(4), as they appeared in the SNPRM, are inaccurate, in that paragraph (c)(2) refers to a nonexistent flight instructor course meeting part 61, subpart G, requirements, and paragraph (c)(4) refers to a nonexistent flight instructor course under part 135. Additionally, paragraph (c)(3) is repetitive of other provisions of subpart G of part 61. Therefore, the FAA has revised these paragraphs in the final rule.

This section is adopted with the corrections discussed.

§ 61.191 Additional Flight Instructor Ratings

The FAA proposed to revise this section to permit an airman to accomplish the required practical tests for flight instructor ratings in a flight simulator or flight training device used as part of an approved course conducted by a training center certificated under part 142. Previously, there was no provision for accomplishing the practical test in anything other than an aircraft.

The comments regarding this section are essentially the same as those submitted in response to proposed § 61.187. For the reasons discussed in response to proposed § 61.187, this section is adopted as proposed.

§ 61.195 Flight Instructor Limitations

This section proposed to require flight instructors giving instruction in Category II or Category III operations to be trained and tested in Category II or Category III operations, as applicable.

One commenter agreed with the proposal, but remarked that he would like a better definition of what the Category II and Category III training would be.

While development of such a definition is not the purpose of this rulemaking, testing requirements for these areas are described in §§ 61.67 and 61.68 and training should track the requirements of the appropriate test.

This section is adopted as proposed, with an added reference to § 61.68.

§ 61.197 Renewal of Flight Instructor Certificates

The FAA proposed to amend this section to permit an applicant for renewal of a flight instructor certificate to conduct the required practical test in a flight simulator or flight training device in a course conducted by a training center certificated under part 142. Previously, there was no provision for accomplishing the practical test in anything other than an aircraft.

In addition to the proposal stated above, the FAA inadvertently included certain other proposals in this section. The inadvertent proposals would have required medical qualifications for the renewal of a flight instructor certificate (proposed § 61.197(a)(1) and (a)(2)), permitted alternative methods of renewal of the certificate without accomplishing a practical test (§ 61.197(b)(1) and (b)(2)(iv)), and prohibited the use of a flight instructor refresher clinic for more than two consecutive renewals of a flight instructor certificate (§ 61.197(c)). After publication in the *Federal Register*, the FAA realized that these proposals had been inadvertently included in the NPRM. The FAA proposed to correct the error in an SNPRM, Notice 92–10A, (59 FR 9514, February 19, 1993). In effect, the SNPRM proposed to restore the provisions of current § 61.197.

that an applicant has to complete an approved course conducted by a part 142 certificate holder in order to take the practical test in an aircraft.

Appendix A to Part 61

The FAA proposed to change the title of appendix A to part 61 to read "Practical Test Requirements For Airplane Airline Transport Pilot Certificate and Associated Class and Type Ratings (For part 121 and part 135 Use Only)." This proposal was a companion change to the proposed change to § 61.157, since appendix A implements § 61.157.

Boeing, AIA, and Crew Systems had the same comment that they had concerning proposed §§ 61.63 and 61.64. Essentially, the comment was that the proposals appear to create two types of pilot certificates, one for part 121 and part 135 operations and one for all other operations.

The FAA response to this comment may be found by reference to the discussion of comments about proposed §§ 61.63 and 61.157.

Airbus commented that appendix A should be deleted, and that the provisions of proposed § 61.158 should be used instead. It adds that if appendix A cannot be deleted, it must be amended to accommodate modern aircraft.

The FAA agrees that appendix A has become somewhat obsolete. However, the deletion or updating of appendix A does not relate to the purpose of the proposed rulemaking upon which the final rule is based.

Therefore, in this final rule, appendix A is retitled, but otherwise unchanged. The deletion or updating of appendix A will be addressed as part of Phase II of the part 61 review which is referred to under the section entitled "Related Activity."

Integration of Appendix B to Part 61 Into Practical Test Standards

The FAA proposed to delete appendix B to part 61. FSI asked about the future of a document to replace appendix B.

The FAA does not plan to replace appendix B, as such. Instead, the FAA lists broad areas of aeronautical knowledge in several sections which specify requirements for various certificates and ratings. The specific tasks recommended for an airman to demonstrate competence in the broad areas of aeronautical knowledge are listed in implementing documents, such as the PTS.

Therefore, appendix B is deleted in this final rule, as proposed.

Part 91

§ 91.191 Category II and Category III Manual

The FAA proposed to change the title of this section to include Category III manuals. The text of the proposed section sets forth the requirements for Category III manuals for civil aircraft conducting reduced visibility operations. These operations are defined as Category III operations elsewhere in part 91. Previously, there were no regulatory provisions applicable to part 91 operators who might anticipate Category III operations.

Airbus, in the only comment received, commented that part 91 is not mature enough to warrant regulatory action.

The FAA does not agree. Earlier in this preamble the FAA discussed the sophistication of aircraft operated under part 91, and the intent to not wait until a greater number of aircraft are capable of Category III operations before changing the rule to permit such operations under part 91. The FAA is convinced that it is time to amend part 91 to establish rules for reduced visibility operations.

Persons developing a Category III manual may use as general guidance appendix A, modified as applicable, to address Category III Manual, Instruments, Equipment, and Maintenance. Because there will be few part 91 operators seeking Category III authorization, the FAA does not anticipate that development of Category III manual will impose a significant economic burden on a significant number of operators.

This section is adopted as proposed, except for a change to establish a separate effective date.

§ 91.205 Powered Civil Aircraft With Standard Category U.S. Airworthiness Certificates: Instrument and Equipment Requirements

This proposed section included requirements concerning instruments and equipment for Category III operations.

Airbus made the same comment about this section that it made about proposed § 91.191.

The FAA response is the same as that set forth under § 91.191.

This section is adopted as proposed.

Part 121

The FAA received numerous comments from major airline associations and air carriers that a part 142 certificate should not be required to continue to provide training to employees of other part 121 or part 135 certificate holders. These commenters stated that parts 121 and 135 contain sufficient requirements for instructors, evaluators (check airman), and training program approval and that the FAA does not need to separately specify those requirements in a new part to 14 CFR (part 142).

After reconsideration of the proposal in light of these comments, the FAA agrees that parts 121 and 135 contain sufficient requirements for training, testing, and checking any aircrew subject to those parts. For that reason, the following proposed revisions to these sections of part 121 have been withdrawn: §§ 121.1, 121.401, 121.403, 121.405, 121.407, 121.432a, 121.439, and 121.441. Upon evaluation of comments received, the FAA has concluded that the proposed subparts of part 142 that were applicable to air carriers also were not needed and should be withdrawn. Therefore subparts F, G, H, and I, of proposed part 142 also have been withdrawn.

In addition, the proposed revisions to part 121, appendix H and appendix I have been withdrawn. Part 121, appendix H issues are being addressed under separate rulemaking, as discussed under the section of this document above entitled "Related Activity," and have, therefore, been removed from this final rule. The discussion below entitled "Part 142" explains the rationale for withdrawing proposed appendix I and all proposed sections relating to drug testing.

The FAA has determined, however, that a part 121 or part 135 certificate holder, without obtaining a part 142 certificate, should not be allowed to provide training, testing, or checking to persons who are not aircrew employees of an air carrier certificated under the same part. Operations conducted by these individuals are not sufficiently similar to those of certificate holders to warrant such an exception.

An air carrier interested in providing training, testing, or checking to such persons could modify its training program to suit the needs of those persons and meet the necessary requirements for a training program suitable for approval under part 142.

Operating and training environments of other operators are different from those for air carriers. For example, air carrier training on dispatch (flight release and flight following) and crew resource management (CRM) training that includes dispatch as a resource may not be appropriate for some operators. Therefore, for a part 142 program, a more extensive review of certain flight procedures is needed. Areas of training not common to all operators is further discussed in response to comments about §§ 142.1 and 142.3.

In addition, the FAA received a suggestion to add the term "requalification training" to the companion section in part 135 (§ 135.321). That term is already in common usage and is defined along with the terms defined in this section in FAA Order 8400.10, "The Air Transportation Operations Inspector's Handbook." Because requalification training is and will be accomplished in whole or in part by simulation, the FAA agrees that it should be defined in §§ 135.321 and 121.400. Accordingly, a definition of requalification training is added as paragraph (b)(7) of this section. The FAA further determined that it would be preferable to place the proposed definitions of "facility" and "courseware" only in part 142. Therefore, these definitions are deleted from this section.

§ 121.402 Training Program: Special Rules

The FAA proposed in this section that a part 121 certificate holder may provide training, testing, and checking services to others by contract. To provide training, testing, and checking for another part 121 certificate holder, the certificate holder would have been required to also hold a part 142 certificate and appropriate training specifications issued under part 142.

Several commenters said that the section is entirely a description of functions under part 142 and that it duplicates language in part 142.

The FAA agrees with the commenters that the description of functions proposed in this section duplicates a description of functions covered in part 142. Therefore, the FAA has revised this section in order to eliminate the duplication and to expressly allow part 121 certificate holders to use part 142 training centers to meet all or part of its training requirements if the POI approves that training.

NATCO stated that if each instructor, check airman, and evaluator can be shown to be qualified to fulfill the responsibilities, then a prerequisite for 1 year of employment should have no bearing on that person's effectiveness.

The FAA agrees. As mentioned in the section entitled "Related Activity" there is a separate rulemaking action underway, a final rule, to amend appendix H of part 121 accordingly.

After re-examination following analysis of comments, the FAA revised proposed § 121.402(a) to provide that a part 121 certificate holder may continue to provide training, testing, and checking to another part 121 certificate holder provided the training meets the requirements of part 121 and the POI of that receiving certificate holder approves that training.

The FAA further revised this section to indicate that the only entity, other than another part 121 certificate holder, that may provide training to a part 121 certificate holder is a training center certificated under part 142 of this chapter. This revision will ensure standardization and increase safety through the use of state-of-the-art training media that are inherent in training centers.

This section is adopted with the changes discussed.

Subpart O—Crewmember Qualifications

§ 121.431 Applicability

The FAA proposed to amend this section to permit training centers to provide testing and checking services by contract or otherwise to persons subject to the requirements of part 121.

Several similar comments were received which stated that the section would preclude part 121 certificate holders from providing training to other persons without being certified under part 142.

The FAA agrees that the commenters' analysis is true to the extent that a part 142 certificate will be required for training, testing, and checking offered to persons other than aircrew employees of another part 121 certificate holder.

The FAA proposed this new section to permit a crewmember to credit the training, testing, and checking received under part 142 toward the training, testing, and checking required by part 125.

AMR commented that training centers certificated under part 121, as well as those certificated under part 142, should be allowed to accomplish training, testing, and checking to satisfy this section.

As discussed earlier, there are no training centers certificated under part 121.

For the reasons in the general discussion of part 121 this section is adopted as proposed.

§ 125.297 Approval of Flight Simulators and Flight Training Devices

There were no comments concerning this proposed section. Therefore, this section is adopted as proposed.

Part 135

As discussed above in part 121, the FAA received numerous comments from major airline associations and air carriers that a part 142 certificate should not be required for a part 121 or part 135 certificate holder to continue to provide training to other than its own employees. These commenters stated that parts 121 and 135 contain sufficient detail regarding requirements for instructors, evaluators (check airman), and training program approval and that the FAA does not need to separately specify those requirements in a new part to 14 CFR (part 142).

In general, the comments about the several new proposals or proposed revisions to existing sections of part 135 are very similar to those made in response to similar proposals in part 121. However, there were considerably fewer comments. Nevertheless, all comments received have been carefully reviewed and thoroughly considered.

In response to comments, the FAA has decided to allow a part 135 certificate holder to train the flight crewmembers of another part 135 certificate holder without being certificated under part 142. Like part 121 certificate holders, part 135 certificate holders must obtain a part 142 certificate in order to train persons who are not aircrew employees of another part 135 certificate holder.

The FAA agrees that parts 121 and 135 contain sufficient requirements for training, testing, and checking of aircrews subject to those parts. For that reason, the proposed revisions involving the following proposed sections of part 135 have been withdrawn: §§ 135.1, 135.292, 135.293, 135.297, 135.299, 135.323, and 135.325. Upon evaluation of comments received, the FAA has concluded that the proposed subparts of part 142 that were applicable to air carriers also were not needed and should be withdrawn. Therefore subparts F, G, H, and I, of proposed part 142 also have been withdrawn.

The FAA has determined, however, that a part 121 or part 135 certificate holder, without obtaining a part 142 certificate, should not be allowed to provide training, testing, or checking to persons who are not aircrew employees of an air carrier certificated under the same part. Operations conducted by these individuals are not sufficiently similar to those of certificate holders to warrant such an exception.

An air carrier interested in providing training, testing, or checking to such persons could modify its training program to suit the needs of those persons and meet the necessary requirements for a training program suitable for approval under part 142.

Operating and training environments of other operators are different from those for air carriers. For example, air carrier training on dispatch (flight release and flight following) and CRM training that includes dispatch as a resource may not be appropriate for some operators. Therefore, for a part 142 program, a more extensive review of certain flight procedures is needed. Areas of training not common to all operators is further discussed in response to comments about §§ 142.1 and 142.3.

As discussed below, the following sections, §§ 135.291, 135.321, and 135.324, are retained for this final rule.

§ 135.321 Applicability and Terms Used

The FAA proposed to amend this section to make the requirements of subpart H of part 135 applicable to a training center if the training center provides training, testing, or checking by contract or other arrangement for a certificate holder subject to the requirements of part 135.

Several commenters remarked that this section should be left as currently worded.

The FAA has determined that certain terms should be added to better describe the training, testing, and checking required under this section.

AMR agreed with the section as proposed and suggested that it be expanded to include a definition of requalification training, which is already in common usage and which is defined, along with the terms defined in this section, in FAA Order 8400.10, "The Air Transportation Operations Inspector's Handbook."

Because requalification training is and will be accomplished in whole or in part by simulation, the FAA agrees that it should be addressed in this section. Accordingly, a definition of requalification training is added to paragraph (b) of this section, and the terms have been rearranged to accommodate this definition in its logical order. It should also be noted that the definition of "training center" used in this section is modified in the final as set forth in § 142.3 as adopted.

The FAA determined that it would be preferable to place the definitions of "facility" and "courseware" in part 142. Therefore, these definitions are deleted from this section.

With the revisions discussed above, the section is adopted.

§ 135.324 Training Program: Special Rules

The FAA proposed this new section to permit a part 135 certificate holder to contract with a training center certificated under part 142 to satisfy the training program requirements of part 135.

The FAA also proposed in this section to permit a part 135 certificate holder to provide training, testing, and checking to others by contract. Under the proposal, to provide training, testing, and checking for another part 135 certificate holder, the certificate holder would have been required to hold a part 142 certificate and appropriate training specifications issued under part 142.

Under this final rule, a part 135 certificate holder may continue to provide training, testing, and checking to another part 135 certificate holder. A part 142 certificate will not be needed. The proposed section was revised further to indicate that the only entity other than another part 135 certificate holder that may provide training, testing, and checking to a part 135 certificate holder is a training center certificated under part 142.

The rationale for these changes may be found by reference to the general discussion of this part and § 121.402.

Several commenters said that the section is entirely a description of functions under part 142 and that it duplicates language in part 142.

The FAA agrees with the commenters that this subject is covered in part 142. However, the FAA considers it necessary to include provisions in this section expressly allowing a part 135 certificate holder to contract with a part 142 training center, if the part 135 certificate holder desires to use a part 142 training center for all or part of its training. This training meets the requirements of part 135 and the POI approves that training.

This section is adopted with the changes discussed.

As discussed above under parts 121 and 135, the FAA received numerous comments that a part 142 certificate should not be required for a part 121 or part 135 certificate holder to continue to provide training to other than its own employees.

After a review of comments received, the FAA has determined that part 121 and part 135 are adequate for air carrier training programs and the qualification and training of persons who present those training programs. For this reason, proposed subparts F, G, H, and I of part 142 that govern air carrier training, testing, or checking have been withdrawn.

As explained in the discussion of parts 121 and 135 above, however, the FAA has determined that a part 121 or part 135 certificate holder, without obtaining a part 142 certificate, should not be allowed to provide training, testing, or checking to persons who are not aircrew employees of an air carrier certificated under the same part.

A number of commenters also noted that the provisions regarding drug testing appear to be duplicative of requirements adopted since the publication of the NPRM, primarily in FAA's anti-drug rule, part 121, appendix I. The FAA concurs with these commenters.

Under part 121, appendix I, individuals who provide flight instruction, including simulator training, either directly or by contract for specified aviation employers, must be subject to an FAA-approved anti-drug program that includes all elements of proposed §§ 142.21, 142.23, and 142.25. Similarly, these individuals must be subject to an alcohol misuse prevention program, including alcohol testing, under regulations published in 1994, found primarily at part 121, appendix J. The FAA has determined that these regulations adequately cover those individuals performing safety-sensitive functions. Therefore, proposed §§ 142.21, 142.23, and 142.25, and as discussed above part 121, appendix I, have not been adopted.

The FAA proposed § 142.11 entitled "Training center ratings." This proposed section would have required that, in addition to a training center certificate, a training center certificate holder would have had to obtain a rating to conduct each curriculum. The FAA has determined that ratings will not be necessary, since the subject matter that would have been addressed by ratings will be covered by training specifications. Accordingly, this proposed section has not been adopted as "Training center ratings." It has been adopted as "Application for issuance or amendment."

The FAA also proposed § 142.51, entitled "Qualifications to instruct in a flight simulator or a flight training device." Because the FAA simplified and consolidated instructor eligibility requirements into § 142.47 as adopted, § 142.51 is no longer needed and has not been adopted.

Lastly, in this final rule, all references to "training center certificate holder" have been replaced with "certificate holder" because the meaning is clear within the context of part 142.

Subpart A—General

This general subpart, subpart A, contains the requirements necessary to obtain and maintain certification as a part 142 training center.

§ 142.1 Applicability

This section, as proposed, specified the entities that would have to be certificated under part 142 to provide training, testing, and checking of flight crewmembers.

Boeing commented that the FAA should permit training centers operating under exemption and other means to be granted a "grandfather" certificate immediately. Other commenters were of the same opinion.

The FAA has allowed a 2-year period in order to accommodate applications for certification. Different training entities in operation now are structured to meet different regulatory standards. The time allowed

and training specifications. Exceptions are listed in paragraph (b).

This section is adopted with the changes discussed above.

§ 142.3 Definitions

This section proposed terms applicable to part 142.

AIA commented that this section would not allow airplane manufacturers the flexibility they enjoy today to revise training programs to accommodate customer-unique training needs.

The FAA believes that the definition of "specialty training" can accommodate any customer need, and was designed specifically to allow for subjects that are not generic.

ATA and several part 121 certificate holders commented that the definition of "core curriculum" is ambiguous and at odds with an air carrier POI's authority for approval of all components of an air carrier training program.

In this final rule, the FAA has more clearly and completely defined "core curriculum." The NPRM incorrectly referred to a "core training program." The definitions contained in this final rule now make a clear distinction between "training program" and "core curriculum." The FAA reiterates in this final rule that the POI is responsible for approving all training for the air carrier to which the POI is assigned.

ATA and others suggested that the term "Line Oriented Flight Training" (LOFT) be changed to "Line Operational Simulation" (LOS) to better accommodate special operational training.

The FAA agrees. The term "LOFT" has been retitled as LOS, which is defined in § 142.3. LOFT was consistent with the term in appendix H of part 121, but LOS and the new terms included in its definition are more descriptive and comprehensive, and they appear in certain AC's, particularly AC 120–35, "Line Operational Simulations; Line Oriented Flight Training, Special Purpose Orientation Training, Line Operational Evaluation," as amended.

Boeing and AIA commented that an evaluator need not be a pilot to certify certain training, such as ground training.

The FAA agrees with Boeing and AIA; however, such a restriction was not proposed. Under proposed § 142.55, a training center would have the flexibility to use someone without an airman's certificate to be an evaluator.

Airbus commented that the definition of "evaluator" is "too restrictive, narrow in scope, and inconsistent with the definition of evaluator contained in SFAR 58."

The FAA believes that the definition of "evaluator" now in this section is sufficiently broad to provide training centers with maximum flexibility for scheduling and personnel assignments. However, the proposed definition of "evaluator" has been reworded to make it clear that an evaluator may perform tests for authorizations and proficiency checks, when the evaluator is qualified under the applicable operational part, as well as for the test for certification and added ratings. While the definition of "evaluator" under part 142 is somewhat different than the definition of that term under SFAR 58, the FAA did not attempt to reconcile the definition with SFAR 58. Although different, the definition for "evaluator" contained in each of these parts adequately addresses the functions performed in these parts.

Boeing also commented that the proposed definition of "specialty training" could imply that FAA approval is required for training that is not required by any part of 14 CFR. Several other persons made similar comments in reference to other sections.

The FAA agrees with the commenters. The definition of "specialty training" has been reworded to exclude training not designed to satisfy the requirements for any FAA certificate, rating, authorization, test, review, check, or qualification.

those persons meet certain alternative qualifications. The FAA has determined that it is appropriate to include those alternative qualifications in this final rule. (See also the discussion below under § 142.47.)

With the changes discussed, this section is adopted as proposed.

§ 142.5 Certificate and Training Specifications Required

This section proposed that no person may operate a training center without a training center certificate and training specifications, as described in part 142. Paragraph (b) further proposed that a training center certificate applicant would be issued a training center certificate and training specifications if the applicant complied with the applicable sections of part 142.

In the only comment received, AIA commented that a training center certificate should be optional if a training center is now operating under existing rules.

Prior to this amendment, there have been no training centers defined and regulated by 14 CFR. Training under previous rules is addressed in the initial discussion of part 142 above.

For the reasons discussed in the previous section, this section is adopted as proposed except for deleting a reference to § 142.77.

§ 142.7 Duration of a Certificate

This section, as proposed, provided that a training center certificate would have no expiration date, but that it could be suspended, revoked, or otherwise terminated by the Administrator. Further, under paragraph (b) of this section, a certificate holder would have to return its certificate to the Administrator if that certificate is suspended, revoked, or terminated.

Jeppesen-Sanderson commented that the provision of no expiration date for a part 142 certificate should be extended to part 141 certificates as well.

The FAA believes that questions about the administration of part 141 that are not directly connected to training by simulation are best left to the review of that part. That review is discussed in the section entitled "Related Activity." Therefore, no changes are made to this section in response to the comment.

Comments made about proposed §§ 61.2 and 142.20, which concern training centers located outside the United States, and other initiatives of the FAA, caused the FAA to change this section as it applies to training centers located outside the United States. Under this final rule, training centers located outside the United States will be issued a certificate which will expire annually. This revision is more thoroughly discussed under proposed § 142.20 (adopted as § 142.19).

This proposed section is adopted with the changes discussed.

§ 142.9 Deviations or Waivers

This section proposed deviation and waiver procedures for a training center certificate holder or an applicant for a training center certificate.

Only one comment was received concerning this section. Professional Instrument Courses, Inc., stated that it does all its training by traveling to different airports around the country and that it uses an "apparent" flight training device instead of a flight simulator. It asked if the intent of the section entitled "Deviations and waivers," is to allow affected companies to operate without facilities and without at least one flight simulator.

It was not the intent of this section to allow operation without facilities and at least one flight simulator or advanced flight training device. It was the intent to allow for unforeseen circumstances that may arise that may warrant a deviation or a waiver, as they have in the past with other rules. The scenario described by the commenter was not unforeseen and is specifically addressed by §§ 142.17 and 142.20 (adopted as § 142.19).

In response to the requirement to submit an application to the FSDO with jurisdiction over the area in which the applicant's business office is located, Boeing asked if it would no longer be acceptable for it to file an application with the FAA Aircraft Evaluation Group (AEG) for part 121 training.

The FAA has determined that review and preliminary approval of certificate applications and training programs is more within the charter of FSDO's than AEG's. Accordingly, under this final rule, an application for certification under part 142 must be filed with the FSDO having jurisdiction over the area in which the applicant's training center is located.

Paragraph (b), as proposed, would require that each certificate application provide information about, but not limited to, each management position, facility, record, and curriculum of the training center. Paragraph (b)(1) proposed:

(b) Each application for a training center certificate and training specification shall provide—

(1) A statement showing that the minimum qualification requirements for each management position are met or exceeded.

Several commenters stated that proposed paragraph (b)(1) is redundant with proposed § 142.15.

The proposals were different in that proposed paragraph (b)(1) would require a statement that would hive to accompany a certificate application, while proposed § 142.15 would require qualification of management personnel and a statement about adequate numbers of those persons.

In the final rule, however, paragraph (b)(1) has been reworded slightly in the interest of brevity and clarity.

Paragraph (b)(6) proposed:

(b) Each application for a training center certificate and training specification shall provide—

* * * * *

(6) A description of the applicant's training facilities, equipment, qualifications of personnel to be used, and proposed evaluation plans;

While no comments were received concerning evaluation plans, the FAA has decided to remove the reference to "evaluation plans" in order to simplify the application process and the quality control procedures to be used by the certificate holder. Separate evaluation plans would be largely redundant with features of a quality control system.

Paragraph (b)(7) proposed the following:

(b) Each application for a training center certificate and training specification shall provide—

* * * * *

(7) A training program, including curriculum, syllabi, outlines, courseware, procedures, and documentation to support the items required in subpart B or subpart F of this part, upon request by the Administrator.

FSI commented that paragraph (b)(7) should be reworded to prevent the FAA from being inundated by materials accompanying an application for certificate. Boeing and Airbus made similar comments.

As suggested by commenters, the FAA has reworded paragraph (b)(7) to require submission of specified material only upon request of the Administrator.

Airbus commented that the text of § 142.13(b)(7) should be changed to improve clarity and to be consistent with FAA Order 8400.10, VOL 3, Ch 2, Sec 1. It states that the words "syllabus" and "syllabi" have unclear definitions in the context of crewmember training programs and were, for that reason, not used in the 8400.10 definitions.

certificate or rating in fewer than the minimum hours prescribed in part 61 of this chapter if the applicant proposes to do so.

Boeing and AIA commented that paragraph (b)(10) should be made consistent with SFAR 58.

The FAA believes that this paragraph is consistent with SFAR 58. This paragraph refers to § 61.109 and other sections of part 61 that specify minimum hours of aeronautical experience that a part 142 certificate holder may wish to reduce further in non-traditional courses other than AQP.

United commented that "to require United, or any other (part) 121 certificate holder similarly situated, to duplicate all of its facilities, equipment, courseware and personnel in order to continue training by contract or other arrangement and then have the FAA inspect and approve the requirements . . ." is not conserving resources.

The FAA did not intend to require duplication of facilities and equipment. The buildings, classrooms, flight training equipment, and instructors may be the same that are used in pursuit of normal business in accordance with a part 121 or part 135 certificate. Some training programs offered to persons other than aircrew employees of another air carrier may be essentially the same as programs now in use. With minor modification, training programs can be presented under a part 142 certificate to persons other than air carrier certificate holder employees. ATA and several part 121 certificate holders had concerns similar to United in their comments to proposed § 142.17. The FAA addresses their comments in the discussion below under proposed § 142.17.

Paragraph (c) proposed that facilities actually be in place at the time of application, and not simply planned or expected.

Several commenters stated that this would be an unduly burdensome expenditure for equipment too far in advance of its use, especially for new entrants into the training industry.

The FAA agrees that facilities need not already be in place at the time of application. This paragraph has been reworded to require that facilities and equipment be available for inspection and evaluation prior to approval. This will preclude expenditure of FAA resources on frivolous or tentative plans that may never come to fruition due to changed business plans. It will permit the FAA to evaluate actual facilities rather than those that are merely planned and subject to later change. The FAA believes that such measures are necessary in order to conserve public resources and in order to maintain the highest standard of facilities in training centers. Paragraph (d)(2) proposed:

(d) An applicant who meets the requirements of this part and is approved by the Administrator is entitled to—

* * * * *

(2) Training specifications, issued by the Administrator to the training center certificate holder, containing—

(i) The type of training authorized, including—

(A) Training center ratings; and

(B) Approved courses;

(ii) The category and class of aircraft that may be used for training;

(iii) Registration numbers and types of aircraft that are—

(A) Subject to an airworthiness maintenance program required by parts 91, 121, 125, 135, or any other parts of this chapter; and

(B) Suitable for the type of training, testing, or checking being conducted;

(viii) Any other items the Administrator may require or allow.

Several air carrier operators, commenting on proposed paragraph (d)(2), stated that training specifications would not be convenient, and that courses approved under parts 121, 135, or 142 would provide all the course specification that is required.

Based on prior experience, the FAA believes that many administrative matters not concerning course specification have been accommodated very well by the use of operations specifications for air carrier operators. This is a new concept for training entities, but experience with similar operating specifications issued to air carrier certificate holders has shown that the procedure will allow maximum administrative convenience. Especially in light of the removal of the proposed requirement for ratings for training centers, the FAA concludes that providing for training specifications is administratively wise. As stated previously in this preamble, a part 142 certificate (and attendant training specifications) will not be required for part 121 certificate holders to train other part 121 certificate holders or for part 135 certificate holders to train other part 135 certificate holders. Therefore, training specifications will be applicable to air carrier certificate holders only if those certificate holders choose to apply for a part 142 certificate.

For the reasons stated, § 142.13(d)(2) is adopted as proposed and renumbered as § 142.11(d)(2).

FSI commented that proposed paragraph (d)(2)(iii) would preclude short-notice change of aircraft and the use of customer-owned aircraft unless there is a 1-day change notification procedure. Airbus made similar comments about aircraft to be used by aircraft manufacturer training centers.

The FAA agrees that the proposal may be too restrictive on certain potential training centers, including aircraft manufacturer training centers, which might offer training in aircraft rather than in a flight simulator or flight training device. Therefore, proposed paragraph (d)(2)(iii) has been deleted. Proposed paragraphs (d)(2)(iv) through (d)(2)(viii) have been redesignated as (d)(2)(iii) through (d)(2)(vii).

Regarding proposed paragraph (d)(2)(vi), Boeing commented that the proposed requirement to list the name, address, and courses approved for each satellite training center would preclude "offload training."

The FAA does not agree that these proposed requirements would preclude the training to which Boeing referred. The proposal does not prevent training at sites other than the training center location or satellite training center location, as long as a training center or satellite training center of the certificate holder complies with the certification requirements of part 142. Therefore paragraph (d)(2)(vi) is adopted as proposed; however, since proposed paragraph (d)(2)(iii) has been deleted, proposed paragraph (d)(2)(vi) is adopted as paragraph (d)(2)(v).

The FAA has decided that effective reference to and tracking of simulation equipment requires the use of FAA-assigned identification numbers for that equipment instead of serial numbers assigned by the manufacturer of such equipment. Accordingly, proposed paragraph (d)(2)(v) has been reworded to reflect this requirement and is adopted as paragraph (d)(2)(iv).

Paragraph (e) proposed the following:

(e) The Administrator may deny, suspend, revoke, or terminate a certificate under this part if the Administrator finds that—

(1) Any certificate the Administrator previously issued to the applicant for, or holder of, a training center certificate, was revoked, suspended, or terminated within the previous 5 years;

(2) An applicant for, or holder of, a training center certificate employs or proposes to employ a person who—

(i) Was previously employed in a management or supervisory position;

(ii) Exercised control over any certificate holder whose certificate has been revoked, suspended, or terminated within the last 5 years; and

(e)(2)(iii) all apply to persons that a training center employs or proposes to employ. These three paragraphs are linked together by the semicolons and the "and" following (e)(2)(ii). It is not necessary to repeat the "and" after (e)(2)(i). To correct an editorial error in the proposal, the FAA has inserted the word "or" to appropriately separate paragraphs (e)(1) and (e)(2).

This section is renumbered as § 142.11 and adopted with the several changes discussed.

§ 142.15 (Adopted as § 142.13) Management and Personnel Requirements

The FAA proposed in this section that a training center must show that it has and maintains a sufficient number of qualified instructors, evaluators, and management personnel competent to perform required duties.

Only one comment was received concerning this section. That comment stated that this section was unnecessary and should be deleted.

The FAA has determined that the proposal referred to above is necessary to ensure that a training center can operate in compliance with the certification provisions contained in proposed part 142. The FAA needs this information, along with the other information required by this part, to approve applications for certification under part 142. Therefore, this section is renumbered as § 142.13 and adopted as proposed.

§ 142.17 (Adopted as § 142.15) Facilities

In this section, the FAA proposed the following in paragraph (b):

(b) An applicant for, or holder of, a training center certificate shall establish and maintain a principal business office that—

(1) Has a mailing address in the name shown on its training center certificate application, or training center certificate, after it is issued; and

(2) Has facilities adequate to maintain the records required by this part.

(3) Is not shared with another certificate holder; however, automated recordkeeping systems approved by the Administrator may be shared by more than one training center or certificate holder.

This paragraph would require a training center to establish and maintain a principal business office that could not be shared with a part 121, 135, 141, or 142 certificate holder. The intent of this paragraph was to ensure that the principal business office of a training center is located at a permanent physical location with the characteristics of an ordinary business office. It was intended to preclude the use of transient locations with inadequate facilities for properly maintaining records.

The FAA proposed this paragraph to preclude certain difficulties with commingled records or with changing standards for some students of training entities offering training under more than one part of 14 CFR. Commingling is considered undesirable because different standards apply to entities certificated under the several 14 CFR parts. However, upon reconsideration, the FAA does not believe that proposed paragraph (b)(3) is necessary because the FAA can prevent the commingling of records by better guidance on recordkeeping requirements and special emphasis on surveillance and inspection of that recordkeeping. Therefore, the proposed restriction has been deleted.

Paragraph (b)(2) of § 142.17 proposed that records required by part 142 must be kept at a principal business office. This proposed requirement was to permit the FAA to locate and periodically review records in order to determine compliance with part 142 standards.

AMR commented that the recordkeeping location requirement in proposed paragraph (b)(2) would work only where the principal business office and the training facility are co-located, and in no case would it be workable for a satellite training center.

FSI, several part 121 certificate holders, and the Regional Airline Association (RAA), commenting on proposed paragraph (d) stated, that the proposed requirement to have "exclusive use of" at least one flight simulator would preclude "dry leasing" of flight simulator time.

For the purposes of this section, the FAA intended that the term "exclusive use" include "dry leasing." The FAA recognizes that "dry leasing" is a normal practice in the industry, and that its continuation is essential to the industry for at least the foreseeable future. However, for clarity, the wording of this provision has been revised to require that the training center have the flight training equipment "available exclusively" for adequate periods of time. This is to distinguish the requirements of this section from other "exclusive use" requirements of other regulations, which may not include "dry leasing." It should be noted that the FAA did not propose to prohibit sharing of flight training equipment. In fact, the FAA anticipated that such sharing would be likely. Therefore, the FAA has revised proposed paragraph (d) by adding the words "available exclusively for adequate periods of time."

A few commenters, also commenting on proposed paragraph (d), recommended that the proposal to have readily available at least one flight simulator as a prerequisite to apply for a part 142 certificate be clarified in the rule language. Gateway Technical College commented that institutions such as theirs are unable to afford to own or lease a flight simulator, but that they are able to provide a needed service by use of flight training devices only. Gateway and Broward Community College suggest that the FAA allow a "low-end part 142 school" or a limited part 142 certificate.

The FAA believes that flight training in aircraft and in flight training devices is adequately covered by part 141 pilot schools and that the primary emphasis of part 142 training centers will be training with flight simulators. However, the FAA believes that essentially equivalent training can be accomplished by use of advanced flight training devices that represent a specific aircraft in cockpit configuration, function, and flight handling characteristics when those flight training devices are supplemented with training in the same type aircraft. Advanced flight training devices with those characteristics are currently qualified by the FAA as Level 6 and Level 7 flight training devices. Therefore, proposed paragraph (d) has been reworded to permit an applicant to obtain a part 142 certificate if it has an advanced flight training device.

In an apparent comment to proposed § 142.17(d), ATA and several part 121 certificate holders commented that this section would "require a part 121 certificate holder . . . to purchase duplicate simulators, CBT stations, training aids, and other training devices for use in the part 142 school even if its part 121 devices are not 100% utilized and (are) available for contract training."

As also discussed above under proposed § 142.13 in response to a comment from United, the FAA did not intend to require duplication of flight training equipment. The commenters may have interpreted proposed paragraph (d) to mean that the exclusive use provision of proposed § 142.17(d) could require some duplication. The FAA did not intend for air carriers to needlessly duplicate existing equipment. It only intended that the training center have exclusive use of the equipment for the period of time that is needed. As stated above, the FAA has revised proposed paragraph (d) to state that the facilities must be available exclusively for adequate periods of time to complete the required training, testing, or checking. Therefore, the duplication described by the commenters is not required.

TWA commented that the proposals in this section implied two different standards for aircraft type ratings—one for part 142 training centers and one for part 121, 135, and 141 certificate holders.

TWA, and other commenters, also raised this issue in comments to § 61.63. The FAA disposed of comments on added type ratings in the section-by-section analysis of § 61.63. In this discussion, the FAA explains that there are not two different standards for airman performance for an added type rating.

This proposed section has been changed as indicated above, has been renumbered as § 142.15, and is adopted with the changes discussed.

AMR asked if a satellite training center also would have to have a flight simulator, its own principal business office, and if the parent training center's instructors could instruct at both a training center and at a satellite training center. It stated that there is an inference that a satellite training center would have to apply for a certificate, but that proposed § 142.19 would not require a certificate for a training center. It suggested that only the main training center hold a certificate.

The FAA agrees. The FAA proposed that only the principal training center must hold a training center certificate and this proposal has not been changed in the final rule.

The discussion of this section in the NPRM indicated that a satellite training center would have to have at least one simulator and the other facilities required by this part. However, it should be noted that proposed § 142.17 has been revised in response to comments to allow a person with an advanced flight training device (i.e., a Level 6 or Level 7 flight training device) to apply for a training center certificate. Thus, a satellite training center would be permitted to operate with such a device in lieu of a flight simulator.

A satellite training center need not have separate management personnel. It does not have to have a separate principal business office. Instructors and evaluators may work at more than one training center or satellite training center, provided those persons meet the requirements of part 142, as required by proposed § 142.19(a)(2), which is adopted as § 142.17(a)(2) in the final rule.

See the discussion of the following section for restrictions on satellite training centers located outside the United States.

This section is renumbered as § 142.17 and adopted by revising proposed paragraph (a)(2) to better clarify the location of the supervisors.

§ 142.20 (Adopted as § 142.19) Foreign Training Centers: Special Rules

The FAA proposed, under § 142.20, that a training center or satellite training center may be located outside the United States only if it is in a location approved by the Administrator. This section further proposed that a training center or satellite training center located outside the United States may issue U.S. pilot certificates to U.S. citizens only but may add ratings, authorizations, and endorsements to all pilot certificates issued by the FAA.

Three comments were received concerning this proposed section.

FSI asked what authority the FAA has to approve or deny locations of training centers outside the United States, since the Departments of Commerce, Defense, and State have jurisdiction over this matter.

The FAA is withdrawing its proposal to approve the location of training centers outside the United States. It is sufficient to set the standards for certification of training centers located inside and outside of the United States. Therefore, proposed paragraph (a) has been amended to remove references that the Administrator must approve the location of training centers outside the United States. Further, paragraph (a), as adopted, specifically states that certificates for training centers outside the United States are issued at the discretion of the Administrator.

AMR commented that this section seems to ignore the possibility of part 121 and part 135 initial and recurrent checks being conducted at a foreign training center.

The FAA agrees that those areas need to be specifically addressed. (See also the § 61.2 discussion related to this matter.) A new paragraph (c) has been added to this section to make explicit the authority of foreign training centers to conduct proficiency checks, pilot reviews, recency of experience requirements, SIC qualifications, and other training subject to approval of the Administrator.

centers located outside the United States.

The FAA has made editorial changes to this section to make it clear that a training center may prepare and recommend applicants for certificates and ratings, but may not actually issue a certificate or rating without authorization to issue a specific kind of certificate or rating.

Also, the FAA proposed, in § 142.7, a permanent certificate. The certificate could have been suspended or terminated, but would not require renewal. The objective of this proposal was to simplify paperwork and reduce the workload for the FAA and applicants. However, the FAA has determined that there is a need to provide for periodic renewal of a certificate for those training centers outside the United States in order to ensure adequate safety oversight. Other air agencies outside the United States, such as repair stations certificated under part 145, have annual renewal requirements.

This section is renumbered as § 142.19 and adopted with the changes discussed.

§ 142.21 Prohibited Drugs

Reserved. See the discussion above entitled "Part 142."

§ 142.23 Testing for Prohibited Drugs

Reserved. See the discussion above entitled "Part 142."

§ 142.25 Refusal to Submit to a Drug Test

Reserved. See the discussion above entitled "Part 142."

§ 142.27 Display of Certificate

No comments were received concerning this proposed section. Therefore, it is adopted as proposed.

§ 142.29 Inspections

This proposed section would require training centers to permit inspections by the FAA at reasonable times and places.

AMR made some suggestions for essentially editorial changes.

This section was adopted as proposed, with the small editorial changes suggested by the commenter.

§ 142.31 Advertising Limitations

This section proposed to restrict training center advertising to that training that has been approved by the Administrator.

Boeing and AIA commented that the proposal would restrict it from offering non-FAA approved training to non-U.S. customers. Several air carrier certificate holders commented that the proposal would preclude the conduct of training not under the jurisdiction of the Administrator, such as training for foreign corporations that would meet the requirements of that foreign country. Others commented that some training centers might want to offer training in ancillary subjects that are not required by any part of 14 CFR. Commenters offered first aid, maintenance technician procedures, and meteorology as examples.

The FAA agrees that the proposed advertising limitations should be reworded to provide for circumstances such as those described by the commenters. Therefore proposed paragraph (a) has been revised to indicate that this section applies to training that is designed to satisfy any requirement of 14 CFR. Any training offered by a training center that goes in whole or in part to satisfying a requirement of 14 CFR must be approved. Training for other purposes need not be approved. Training that is not specifically approved by the FAA may not be advertised as FAA approved.

No comments were received concerning this proposed section. Therefore, it is adopted as proposed.

Subpart B—Aircrew Curriculum and Syllabus Requirements

§ 142.35 Applicability

This section specifies that the training programs described by this subpart apply to that segment of aviation frequently called "general aviation" that operates under part 91, and that is not required by regulation to have a training program.

Airbus commented that this subpart is not applicable to training provided "by part 25 aircraft manufacturer's training centers to its employees, U.S. certificated employees of the aircraft manufacturer, and FAA air carrier inspectors."

This subpart applies to all training center activity except that provided by a part 121 certificate holder to another part 121 certificate holder or by a part 135 certificate holder to another part 135 certificate holder, unless the certificate holder providing such training chooses to become a part 142 certificate holder.

This section is adopted as proposed.

§ 142.37 Approval of Flight Aircrew Training Program

The FAA proposed, in proposed paragraph (c)(1), that training programs submitted for approval specify which courses are part of a specialty training curriculum. Core curricula and specialty curricula are defined in § 142.3.

Proposed paragraphs (c)(2) and (3) require applicants, when filing an application for training program approval, to indicate which requirements the training program curriculum will satisfy and which requirements the training program curriculum will not satisfy.

AMR commented that the proposed provision of § 142.37(c)(1) needs clarification. In simplest terms, it states, not every course must be designed to accomplish all the learning objectives required for every practical test.

ATA and several part 121 certificate holders commented that proposed paragraph (c)(1) does not make clear what constitutes an approved training program. They cite the detail of § 121.424 and appendix H of part 121 as examples of training program detail for the ATP certificate and airplane type rating. They state that it appears that an approved training program for a particular certificate or rating would consist of the maneuvers, procedures, and exercises required for the certification practical test.

The FAA agrees with the commenters about training to meet the requirements of the PTS. The areas of aeronautical knowledge for each certificate and rating are listed in the applicable section of part 61. The PTS lists the tasks, conditions, and standards of performance for all certificates and ratings. Currently, the PTS, inspector's handbooks, appendix A of part 61, and appendices E, F, and G of part 121 list maneuvers and procedures for a curriculum nor only the ATP certificate and airplane type rating. Guidance on the content, style, and length of all written tests is in other documents. Other considerations to include in a training program are listed in handbooks, advisory circulars, and in other FAA publications. Section 142.37(d) outlines the general requirements for a training program. It is not necessary and not practical to put all details in 14 CFR.

FSI commented that, since paragraph (c)(2) requires an applicant for each curriculum approval to indicate which requirements of part 61 would be satisfied, the requirement in paragraph (c)(3) is redundant.

The FAA believes that both paragraphs are needed to help ensure that no requirement goes unaddressed by oversight or by assuming that the requirement will be met in some other way.

to make clear that curricula approved under SFAR 58 are approved without modification for use in this part.

The section is adopted as revised.

§ 142.39 Training Program Curriculum Requirements

This section proposed that each training program curriculum submitted for approval would have to contain a syllabus, minimum flight training equipment requirements, and minimum instructor and evaluator qualifications for each proposed curriculum. However, for AQP, the FAA proposed that approval of a curriculum under SFAR 58 would, for an applicant, constitute complete approval of that curriculum for use by a training center certificated under part 142, since the AQP application contains curriculum criteria at least as detailed as the part 142 curriculum requirements set forth in § 142.39.

Airbus commented that the section should be restructured to provide for initial and final approval of training program curricula.

Different stages of initial and final approval are specifically not a feature of part 142. After determining that a proposed training program meets all applicable requirements, the Administrator will approve the training program. If approval of a training program curriculum proves to have been inappropriate, the Administrator may use the authority of §§ 142.7 or 142.13(e) to suspend or revoke a certificate. The intention is to simplify the application and approval process. For the reason stated, this section is not revised to include a provision for initial and final approval stages.

Paragraphs (c) and (d) of this section proposed that each curriculum submitted for approval must include:

(c) Minimum instructor and evaluator qualifications for each proposed curriculum;

(d) A curriculum for initial training and continuing training of each instructor or evaluator employed to instruct in a proposed curriculum.

United commented that paragraphs (c) and (d) are not required and are overly burdensome for part 121 certificate holders.

The FAA believes that these paragraphs are necessary controls, and that presenting the instructor and evaluator qualifications to the FAA at the time of application for a part 142 certificate and changes to its curriculums would cause almost no additional burden to a part 121 certificate holder. It is even likely that existing documentation for these positions could be used in its existing format. The FAA has determined that these paragraphs should be adopted to ensure that instructors meet, and maintain, the skills considered essential for properly instructing their students.

Paragraph (e) proposed:

(e) For each training program that provides for the issuance of a certificate or rating in fewer than the minimum hours prescribed by part 61 of this chapter for training, testing, and checking conducted under part 142 of this chapter—

(1) A means of demonstrating the ability to reduce the minimum hours prescribed in part 61 of this chapter for training, testing, and checking conducted under part 142 of this chapter; and

(2) A means of tracking student performance.

Boeing and AIA commented that proposed paragraphs (e)(1) and (2) do not allow credit for previous experience in similar aircraft "per AC 120–53."

Paragraph (e) is directed to those hours which are specified in part 61, as stated, and has no impact on AC 120–53.

might include incidents, accidents, hours flown, and type of flying. A training center would have to present historical data covering at least 1 year (or other period of time approved by the Administrator) before it could be granted a reduction in the minimum hours prescribed in this section. Data covering performance over this period of time is considered necessary to properly evaluate student performance. Data covering a shorter term would not be sufficient to allow the FAA to evaluate performance during varying seasonal conditions.

In a general comment to this section, TWA pointed out that the requirement for a letter of authorization did not appear in the proposed rule text.

The FAA did not intend to propose such a requirement. The NPRM preamble mistakenly stated that proposed paragraph (a)(4) would require a training center to issue annually a letter of authorization to each instructor for each course that instructor may teach. The final rule does not adopt such a requirement.

The FAA has reworded the reference to a curriculum, which appeared in this proposed section to instead reference a curriculum containing a syllabus to indicate that a curriculum is implemented by a syllabus. This editorial change is to maximize standardization with training program terms already in use and widely accepted.

This section is adopted with the changes discussed.

Subpart C—Personnel and Flight Training Equipment Requirements

This subpart contains instructor and evaluator eligibility requirements, addresses instructor and evaluator privileges and limitations, and addresses instructor and evaluator training, testing, and qualification for training programs approved under subpart B. This subpart also contains rules governing flight training equipment requirements.

§ 142.45 Applicability

This proposed section sets forth the personnel and equipment required for training that is to meet the requirements of part 61.

Airbus commented that this section should be restructured to exempt employees of the training center, U.S. certificated employees of the aircraft manufacturer, and FAA inspectors.

The FAA does not agree. The persons cited by the commenter are required to meet the training and certification requirements of part 61.

AMR commented that the proposal does not make clear whether an instructor or evaluator would be subject to the proposed requirements contained in both subpart C and subpart G of this part. It states that current training center practice is to use instructors to teach pilots who operate under various parts of 14 CFR.

Because the FAA has decided to delete proposed subpart G, the commenter's question is academic in this instance. However, an instructor or evaluator may instruct non-air-carrier customers and air carrier customers if the instructor or evaluator is otherwise qualified and designated by the training center to perform both functions.

With editorial changes for clarity and brevity, this section is adopted as proposed.

§ 142.47 Training Center Instructor Eligibility Requirements

To make as many qualified instructors as possible eligible, the FAA proposed in paragraph (a) of this section that training center instructors meet only one of the following standards: Hold at least a commercial pilot certificate with an instrument rating; at the time of accepting employment, be currently qualified to instruct under part 121 or part 135; or hold a ground instructor certificate with instrument rating and meet at least the commercial pilot aeronautical experience requirements.

holding any other certificate.

The FAA does not believe that the holder of an ATP certificate should be permitted to instruct persons by virtue of holding the ATP certificate, except in air transportation service as authorized by § 61.169 of this chapter. The authority of § 61.169 does not extend to instructing other airmen to qualify for the ATP certificate or instructing other holders of an ATP certificate for added ratings, except within the narrow and specific instance of instructing in air transportation service.

Moreover, in response to these commenters, the FAA has determined that instructor qualification requirements of part 142 are at least equivalent to the knowledge and skill requirements for a ground instructor certificate regardless of whether the instructor holds an ATP certificate. Accordingly, the FAA has deleted paragraph (a)(3). Other provisions of proposed paragraph (a)(3) have been moved to other paragraphs.

AMR commented that training centers should be permitted to employ persons who are not pilots to be instructors, such as maintenance instructors, and that the rule language should address that possibility.

The FAA agrees and paragraph (a) has been reworded to make it clear that the requirements of the section, and the subpart, apply only to persons who are employed as instructors in a flight training course that is subject to approval of the Administrator, as discussed under § 142.31. The FAA stated in the discussion of that section that any training offered by a training center that goes in whole or in part to satisfying a requirement of 14 CFR must be approved; however, training for other purposes need not be approved.

Paragraph (b) proposed the following:

(b) A training facility operating under an exemption to part 61 prior to August 1, 1996 may allow a person who has been employed as a simulator instructor for that training facility to continue to instruct provided the training facility—

* * * * *

(ii) Instructs only in qualified and approved flight simulators in which that person has been authorized by the Administrator to instruct within the 12 months immediately preceding certification of the employing training center.

AIA commented that paragraph (b)(2)(ii) does not allow existing instructors to transition to new equipment without complying with the new part 142 instructor qualification provisions. It states that the proposal is too restrictive and recommends that it be deleted.

AIA is correct in its interpretation that instructors transitioning to new equipment must comply with part 142 instructor qualification provisions. As an exception, proposed paragraph (b)(2)(ii) (revised and adopted as paragraph (a)(6)(iii)) is a ''grandfather'' provision only for persons who are employed as simulation instructors on the effective date of this final rule and who instruct only on the same equipment. Those persons who do not meet the instructor qualifications of part 142 will not be allowed expanded instructor privileges unless the instructor applicant meets the standards prescribed by part 142.

FSI commented that proposed paragraph (b)(2)(ii) (revised and adopted as (a)(6)(iii)) should be reworded to grandfather privileges of instructors in approved flight training devices as well as privileges in flight simulators.

The FAA agrees with this recommended change because instructors will be using simulation media, not just flight simulators. Proposed paragraph (b)(2)(ii) has been reworded accordingly and, as indicated above, is adopted as new paragraph (a)(6)(iii).

AMR commented that this section indirectly requires a training center instructor to hold at least a second class medical certificate.

who may not hold an instructor certificate. Instructors who instruct in a required crewmember seat in flight must hold a flight instructor certificate with appropriate ratings and an airman medical certificate. The alternative qualification requires a training center to train a potential instructor in specified subjects, and to administer a written test following the instruction. The written test must be approved as a part of the training program. The test must be of similar complexity, difficulty, and scope as the written test for flight instructor airplane and instrument flight instructor. Training center certificate applicants and training centers may consult publication FAA–T–8081–18, *Flight and Ground Instructor Written Test Book* for guidance in developing the written test. The FAA does not intend that the test include questions about flight maneuvers such as turns about a point, chandelles, and spins.

This section is adopted with the changes discussed.

§ 142.49 Training Center Instructor Privileges and Limitations

This section proposed that, to instruct in an aircraft, a training center instructor must hold a current flight instructor certificate with certificates and ratings applicable to the aircraft used for instruction, hold at least a valid second class medical certificate, and meet the recency of experience requirements of part 61. These proposed requirements for aircraft flight instructors are the same as those currently required by part 61.

AMR commented that, by using the words "training, testing, and checking" in proposed paragraph (b), the FAA would impose these requirements on evaluators as well as instructors, and noted that there are no proposed sections dealing with evaluator privileges and limitations. AMR suggested changing the title of this section to include evaluators.

The FAA agrees that the title should be changed as recommended and has reworded the title accordingly and has added evaluation to this paragraph.

Proposed paragraph (c) included the following:

(c) A training center may not allow an instructor to—

(1) Excluding briefings and debriefings, conduct more than 8 hours of instruction in any 24-consecutive-hour period.

FSI, ATA, and several air carrier certificate holders commented that the duty times proposed in this paragraph are too restrictive.

Flight instructor duty time was discussed under § 61.169. As discussed in that section, the FAA is convinced that it is in the interest of safety to assure that instructors are not unduly fatigued when instructing pilots. The proposed duty-time limitations are considered necessary to ensure that instructors are sufficiently alert when giving required instruction.

The FAA has, however, amended this and § 61.169 to exclude briefings and debriefings in response to the concerns of these commenters.

FSI commented that the words ". . . any 24-consecutive-hour period" in proposed paragraph (c)(1) be changed to ". . . a day."

The FAA disagrees with the commenter's suggested wording, for such wording would allow an instructor to conduct 16 consecutive hours of instruction, excluding briefings and debriefings. This practice is considered unacceptable for the reasons stated above.

Proposed paragraph (c)(3)(iv) states that a training center may not allow an instructor to provide flight instruction in an aircraft unless that instructor holds at least a valid second class medical certificate.

ATA and several part 121 certificate holders commented that this paragraph should specify that an instructor who instructs only in simulation need not hold a medical certificate.

Reserved. See the discussion above entitled "Part 142."

§ 142.53 Training Center Instructor Training and Testing Requirements

Section 142.53 proposed initial and annual recurrent training that would be required of all training center instructors.

Paragraph (a) proposed:

(a) Prior to authorization to instruct a course of training, testing, and checking, and except as provided in paragraph (c) of this section, every 12 calendar months beginning the first day of the month following an instructor's initial authorization, a training center certificate holder must ensure that each of its instructors meet the following requirements:

(1) Each instructor must satisfactorily demonstrate to an authorized evaluator knowledge of, and proficiency in, instructing each course of training for which that instructor is authorized to instruct under this part.

FSI commented that the proposal in paragraph (a)(1) should provide that an instructor's demonstration would be made ". . . in a representative segment of a course." According to FSI, this change would provide a more suitable way to determine an instructor's knowledge and proficiency in multiple subjects in different courses for various aircraft types.

Paragraph (a) has been reworded. Changing the wording to "instructing in a representative segment of each curriculum," allows evaluation of instructors in a broad sampling of all subjects. However, the FAA has specified that the evaluation must include a representative segment from *each* curriculum.

Paragraph (b)(2), as originally proposed, provided that "An instructor who is unable to hold a medical certificate may not instruct. . . ." In the SNPRM referred to earlier, the FAA proposed a change to paragraph (b)(2) to eliminate the words "who is unable to hold a medical certificate," because that restriction was believed to be unnecessary.

For clarification, the FAA has further revised paragraph (b)(2) of the final rule to specifically permit an instructor to provide instruction even if he or she does not hold an airman medical certificate, provided that the instructor is otherwise qualified. It is also revised by removing an obsolete reference "advanced simulation plan."

Proposed paragraph (b)(2)(ii)(B) requires instructors to participate in an in-flight observation training course, that includes three takeoffs and three landings, and that includes performing at least 1 hour of LOFT as the sole manipulator of the controls. The 1 hour of LOFT must be performed in a flight simulator that replicates an aircraft of the same class and, if a type rating is required, of the same type as the aircraft represented by the qualified and approved flight simulator in which that instructor is designated to instruct.

Several commenters stated that paragraph (b)(2)(ii)(B) refers to Level C or Level D flight simulators, and suggested that appendix H of part 121 be changed by this rulemaking to indicate levels instead of phases.

The proposed requirement contained in this paragraph can be accomplished only in Level C or Level D flight simulators, as the Administrator currently qualifies flight simulators. As discussed above in the section of this document entitled "Related Activity," the FAA has issued an NPRM entitled "Part 121; Appendix H, Advanced Simulation Plan Revisions" (60 FR 8490; February 14, 1995) to update and revise appendix H of part 121. In that NPRM, the FAA proposes to change all references from "phases" to "levels" in part 121, appendix H.

ATA commented that, in many cases, part 121 instructor training is more comprehensive than the training that would be required under this section and under § 142.55. It recommended that wording be incorporated to credit an instructor with equivalent training that he or she may have completed in a part 121 instructor training course.

The FAA agrees. Accordingly, a new paragraph (d) has been added to permit an instructor to receive credit for equivalent instructor training courses taken under part 121 or other courses the Administrator finds equivalent.

AMR commented that this section and title should be amended to specify that instructors who teach in courses not leading to pilot certification under part 61 are not subject to the provisions of this section.

The proposed requirements contained in this section apply to instruction designed to satisfy only various requirements of 14 CFR. They address, among other things, courses for review, proficiency, added ratings, and authorizations in addition to certification. As discussed in the section-by-section discussion of § 142.31, the instructor qualification requirements of part 142 do not apply to courses that are not designed to satisfy any part of 14 CFR and that are not subject to approval of the Administrator.

One commenter asked why simulation-only instructors are not required to complete initial or recurrent training in aircraft, the same as instructors who instruct in flight.

The FAA has used past experience and recommendations from a joint industry-FAA working group to form alternatives to in-flight training, testing, and checking that ensure an equivalent level of safety, since simulation-only instructors will not be instructing in aircraft.

ATA and several part 121 certificate holders commented that proposed § 142.91 in subpart G, which paralleled this section and has been withdrawn, should have a paragraph added to require an annual written test and an annual proficiency check in each flight simulator, flight training device, and/or aircraft in which the instructor will be instructing. According to these commenters, the test and check should cover the maneuvers that the instructors will be instructing in.

The FAA agrees and has revised this proposed parallel section accordingly.

AMR asked if an instructor could instruct under subpart C and subpart G at the same time. It recommended that this should be permitted.

Although subpart G has been withdrawn, instructors will be permitted to provide instruction to air carrier clients and non-air-carrier clients if otherwise qualified.

AIA commented: "This (sic) is more restrictive than existing check pilot requirements. Why?"

The commenter apparently is referring to this entire section as being restrictive. The FAA would not describe this as more, or less, restrictive than existing check pilot requirements. Check pilots are employed in parts 121 and 135. They provide checks pursuant to the comprehensive training programs required by those parts. A check pilot has functions and responsibilities different from those of a part 142 training center instructor. Thus, the training and checking provisions proposed for part 142 instructors have been tailored to meet part 142 requirements. They necessarily are different than the training and testing requirements applicable to check pilots performing checks under part 121 and part 135.

This section is adopted with the several changes discussed.

§ 142.55 Training Center Evaluator Requirements

Paragraph (a) of this section proposed the requirements for an evaluator, as follows:

(a) In order to authorize a person as evaluator, a training center must ensure that the person—

(1) Is approved by the Administrator;

(iv) Management of unsatisfactory checks and subsequent corrective action.

AMR, commenting on proposed paragraph (a), stated that it was not clear if training center evaluators will have authority equivalent to designated examiners or pilot proficiency examiners, and asked for clarification.

Under part 142 an ''evaluator'' is a person who determines competence of persons applying for a number of different certificates and ratings subject to 14 CFR on behalf of the Administrator. By contrast, designated examiners and pilot proficiency examiners have more limited authority.

ATA and several part 121 certificate holders commented that proposed § 142.93 in subpart G, which paralleled this section and has been withdrawn, should have a paragraph added to require an annual written test and an annual proficiency check in each flight simulator, flight training device, and/or aircraft in which the instructor will be instructing. According to these commenters, the test and check should cover the maneuvers that the instructors will be instructing in.

The FAA agrees and has added a new paragraph (a)(4) to clarify the request of the commenters.

As discussed above, under § 142.53, pursuant to an ATA comment, the FAA has determined that it is appropriate to give credit to potential evaluators who have completed a part 121 evaluator training course.

Accordingly, a new paragraph (c) has been added to permit an evaluator to receive credit for equivalent evaluator training courses taken under part 121 or part 135 that the Administrator finds equivalent.

In response to several comments on proposed § 142.93 (withdrawn) the FAA has added a new paragraph (d) to this parallel section to except evaluators, qualified in accordance with SFAR 58, from the evaluator requirements of this section.

In addition to the above-referenced revisions, several editorial changes have been made. In proposed paragraph (b) the term ''instructor'' is replaced with ''evaluator.'' The term ''curriculum'' has been substituted for the term ''training course'' and the term ''tests'' has been substituted for the term ''checks.'' The editorial changes have been made to bring the terms into conformity with the commonly accepted definitions as used in numerous other parts of 14 CFR and numerous FAA publications.

With the changes discussed, this section is adopted as proposed.

§ 142.57 Aircraft Requirements

Paragraph (a)(1) and (a)(2) of this section proposed that training center aircraft used for instruction be civil aircraft of U.S. registry if used in the United States, and that training centers located outside the country could use aircraft registered in the host country.

Several commenters, including in effect Airbus, discussed the need to train in customer-owned aircraft which might be registered in another country, be operated by the aircraft manufacturer during pre-certification, or be operated under an export certificate of airworthiness.

The FAA agrees and has determined that it is unnecessary to specifically provide for the registration of the aircraft being used. It is sufficient that the training center will have to comply with the registration requirements of the country of operation. Accordingly, proposed paragraphs (a)(1) and (2) have not been adopted. This change should relieve the commenter's concern. These changes will allow training centers more flexibility to train customers in customer-owned aircraft.

With minor editorial changes and restructuring to proposed paragraph (b), this section is adopted as amended.

learning is unfair.

Based on its experience with flight simulation and on study evidence available to its National Simulator Program Manager (NSPM), the FAA has concluded that the statements are true. While some learning may transfer from devices that do not accurately replicate aircraft, the experience gained is not adequate to justify their use as a sole means of training, testing, and checking.

A few air carriers commented that they were not sure what was meant by the words "make, model, and series" used in an example that was provided in the NPRM preamble to proposed paragraph (a)(1), which stated, "If part 61 . . . requires landing in a particular make, model, and series aircraft, then a flight simulator used to simulate that aircraft would have to be qualified and approved both for the visual landing and to simulate the make, model, and series of aircraft." They provide an example of an aircraft type and different models of that type.

The commenters are correct. The FAA did not intend to distinguish between manufacturers' models of the same aircraft type. To make it clear that only the particular aircraft type need be simulated, as intended, the FAA has added the words "or aircraft type" to the text of paragraph (a)(1) in the final rule.

Section 142.59(c)(1) proposed that flight simulators and flight training devices used by training centers be maintained to ensure the reliability of the performances, functions, and all other characteristics that were required for initial qualification of the equipment.

One commenter pointed out an editorial omission of the word "qualification" in the text of this paragraph. The commenter indicated that the last word of proposed paragraph (c)(1) should be "qualification" and not "approval."

The technical guidelines for flight simulators are listed in AC 120–45, as amended. That AC defines qualification as distinct from, and preceding, approval of a flight simulator. The FAA has determined that it should continue the use of commonly accepted words to avoid possible confusion.

Section 142.59(c)(3) proposed that flight simulators and flight training devices used under part 142 be given a functional check before being used. Further, this paragraph proposed that training center instructors must keep a discrepancy log, and enter all discrepancies in that log at the end of each training session or check.

One commenter asked how often the preflight requirement must be met and also the purpose of the requirement.

The preflight is required each day the flight simulator is used. The FAA added the words "each day" to proposed paragraph (c)(3) to make clear the requirement for frequency of preflight inspections. The purpose of preflight inspections is for the instructor to determine whether the applicable Simulator Component Inoperative Guide (SCIG), if any, has been met, or whether all simulator components needed for a specific training or testing period are present and operative. The FAA believes that, to ensure effective training, a flight simulator or flight training devices must accurately replicate the performance of an aircraft. The FAA can determine that flight simulation accurately replicates an aircraft only if all components of a flight simulator or flight training device are checked for proper operation before the device is used.

Section 142.59(d) proposed that, unless otherwise authorized by the Administrator (in an SCIG), all components on a flight simulator or flight training device used by a training center must be operative to ensure faithful replication of aircraft capabilities.

Several comments were received concerning this proposal. Generally, the comments addressed aircraft Minimum Equipment List (MEL), and the fact that the FAA has not developed a master MEL for flight simulators.

Section 142.59(c) proposed to allow training centers to use flight [illegible] without specific route or terminal aids and visual scenes.

While the FAA did not receive comments on this proposed section, ATA and others commented in response to the proposed companion section, § 142.97, (since withdrawn), that operator specific routes may be necessary. The commenters stated that the relaxed specific route requirements during LOFT would not meet the requirements of § 121.409(b)(3).

The FAA understands the commenter's concern. LOFT or other LOS may be used for purposes other than necessarily satisfying § 121.409. If a particular air carrier wants a particular route or other detail represented, it may require that of the training center with which it contracts. It is inefficient for certification and type rating training and testing for all airmen to be subject to an absolute requirement for training along a particular route, which may be "repositioned along" anyway. The FAA believes it is appropriate to leave it to the discretion of a particular air carrier to determine if it wants a specific route simulation in its training program. Therefore, this section is adopted as proposed.

Jet Exam commented that the language of this section could be interpreted to mean that a training center applicant would have to obtain training program approval or a training course approval before it could request approval of a simulator, and that this would be an unnecessary burden on the applicant.

The FAA agrees with the commenter's observation that obtaining approval of a training course before obtaining approval for a flight simulator could be an economic burden. However, the FAA did not propose that a certificate applicant would have to obtain training program approval or a training course approval before it could request approval of a simulator.

A commenter suggested that the acronym "NSPM" should be changed to "the Administrator." According to the commenter, this would allow for the possibility of renaming of that function or redelegation of its functions.

The FAA notes that, while the acronym "NSPM" is used in the NPRM preamble to this section, it did not appear in the NPRM proposed rule text. However, the FAA did use the term "Administrator" in the rule text of the NPRM and final rule as the commenter has suggested.

The FAA added a clause excepting AQP from the requirements of this section, to be consistent with the exception of AQP from the requirements of § 142.39. With that addition, and the other changes discussed, this section is adopted as proposed.

Subpart D—Operating Rules

This subpart sets forth proposed operating rules for training centers that provide training in accordance with subpart B of part 142.

§ 142.61 Applicability

The FAA proposed in this section that the operating rules in this subpart would apply to training centers providing training to clients other than air carrier clients.

Airbus commented that the applicability of subparts D and E should be amended to permit aircraft manufacturer training centers who intend to train only part 121 aircrews, their own employees, U.S. certificated employees of the manufacturer, and FAA inspectors to conduct that training under subparts F, G, H, and I of part 121. The commenter states that part 121 requirements are the most appropriate criteria for these trainees since their duties are related to large aircraft that are operating in air carrier service. Airbus made the same comment about FAA inspectors in comments about several other sections. Other commenters made an essentially identical comment in reference to some applicability sections.

The FAA does not agree that the groups of trainees identified by the commenter should be trained under any rules different from the rules governing certification and type rating requirements for airmen at large. The only exception (a waiver under the authority of appendix A of part 61) is for aircrew

The FAA response to those similar or identical comments apply also to this section. Refer to those sections for discussion of related comments.

For the reasons discussed, this section is adopted as proposed.

§ 142.63 Privileges

Section 142.63 proposed to permit training center instructors and evaluators to meet recency of experience requirements in a flight simulator or flight training device, if the flight simulator or flight training device is used in a course approved in accordance with subpart B or subpart F, as applicable.

This section was revised to delete a reference to subpart F, which has been withdrawn, and to recognize that AQP makes separate and valid provisions for recency of experience of simulation instructors. With the revisions mentioned, this section is adopted as proposed.

§ 142.65 Limitations

Because the FAA intends that flight simulators used in testing, checking, or LOS provide the same time constraints and sequential, or overlapping, circumstances that occur in an actual aircraft, § 142.65(a) proposed to prohibit the use of flight simulator or flight training device repositioning, freeze, or slow motion features during testing, checking, and LOFT.

ATA, several part 121 certificate holders, and an aircraft manufacturer commented that prohibiting the use of repositioning during LOFT might cause several hours of simulated cruise flight with very little value.

The FAA agrees with the commenters, and has revised proposed paragraph (a) by adding paragraph (a)(2) to permit the use of reposition along a route of flight to a point where the descent and approach phase of the flight begins. Also, in paragraph (a)(1), any slow motion, hold, or reposition features may be used at any time during training and practice, to help stimulate the simulation industry by helping minimize nonproductive time spent in a flight simulator.

Proposed § 142.65(b)(1) would require a crewmember qualified in the aircraft category, class, and type, if a type rating is required, to occupy each crewmember position during testing, checking, or LOS. During Category II and Category III testing, the copilot position would have to be occupied by a pilot qualified to perform the duties of an SIC for Category II or Category III operations, as applicable.

Airbus commented that this section would effectively prohibit the use of a medically disqualified (simulated) PIC during SIC training and testing unless the PIC had been fully qualified before serving in this capacity.

The FAA believes that a PIC should be able to function as a required crewmember during simulation testing even though he or she does not hold a valid medical certificate, provided that he or she is otherwise qualified in the flight simulator or was qualified in the aircraft type before losing medical certification. The FAA has determined that there is no safety hazard created by persons operating flight simulators without a valid medical certificate. Accordingly, a new paragraph (b)(3) has been added to allow for use of a PIC meeting the circumstances just discussed, and the section is adopted as otherwise proposed.

Subpart E—Recordkeeping

§ 142.71 Applicability

Proposed subpart E, "Recordkeeping," prescribed the records that a training center certificate holder must maintain for students who are not aircrew employees of operators under part 121, 125, or 135, and the records that would have to be maintained for instructors and evaluators authorized in accordance with subpart B of part 142.

for each person who is enrolled in a course for which that person is to gain credit toward satisfying any requirement of 14 CFR. Paragraph (d) proposed:

(d) The certificate holder must provide to the Administrator, upon request and at a reasonable time and in a reasonable place, the records required by paragraphs (a) and (b) of this section.

Only one comment was received. The commenter suggested that the only practical place to keep the required records is at the training center where the activity requiring records takes place. It suggested that paragraph (d) be reworded accordingly.

The FAA agrees and has reworded paragraph (d) to require that the records be kept at the training center or satellite training center where the training is conducted, or at another site approved by the Administrator.

The FAA has revised paragraph (c) to provide that records of qualification to act as instructor or evaluator must be maintained for the period of time that the individual is employed.

This section is adopted as otherwise proposed.

Subpart J—Other Approved Courses (Adopted as Subpart F)

§ 142.115 (Adopted as § 142.81) Conduct of Other Approved Courses

The FAA proposed in this section (formerly numbered as § 142.115 and now renumbered to § 142.81) to provide that training centers or training center applicants may apply for approval to conduct training for persons other than pilot crew members. Under the proposal, a course may be approved by the Administrator upon a finding that it provides a curriculum that will achieve a level of competency equal to, or greater than that required by the appropriate part of 14 CFR.

A few commenters stressed that many types of training do not require FAA approval and that subpart J should be deleted.

While it is true that many courses of training do not require FAA approval, there are several that do, and others that may at some future date require such approval. This proposed subpart is intended to allow a training center or a training center applicant to apply for approval of curricula for persons other than air crews.

TDM Group, Inc., described a flight attendant training program that it is undertaking with McDonnell Douglas and Continental Airlines. It remarked that it would like to begin such training under part 142, and encouraged the Administrator to keep and to expand this subpart.

For the reasons discussed, this section is renumbered as § 142.81 instead of § 142.115 and is adopted as proposed. A minor editorial change has been made to proposed paragraph (c) to indicate that an applicant for course approval must comply with the applicable requirements of "subpart A through subpart F of this part" rather than "subpart B or subpart F of this part" as stated in the proposal.

Editorial Corrections

In addition to the revisions discussed above, a number of editorial changes have been made to the text of the final rule including the renumbering of several paragraphs to conform to the current format and style of the regulations.

Harmonization With ICAO, JAA, and JAR

The proposals adopted in this rulemaking have been compared to ICAO Annex I, "Personnel Licensing," and the JAA/JAR. This rule is compatible with international agreements and parallel regulations, except for the differences which follow:

1. Section 61.65, "Instrument rating requirements," will allow credit for 35 hours of simulated or actual instrument time for those applicants who complete an entire approved instrument curriculum

flight training device, and any part of the 190 hour total experience requirement to be simulated flight if the applicant completes an entire approved commercial airplane curriculum at a training center certificated under part 142. ICAO Annex I, Chapter 7, § 2.4.1.3 allows credit for only 10 hours of simulated flight experience. It should be noted that the superseded § 61.129 allowed credit for 50 hours of simulated flight time toward this rating, which was different from ICAO standards.

The FAA will file a Statement of Differences with ICAO to notify that body of the listed differences.

Paperwork Reduction Act

The reporting and recordkeeping requirements associated with this rule have been approved by the Office of Management and Budget and have been assigned number 2120–0570. Under the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Regulatory Evaluation Summary

Changes to Federal regulations are required to undergo several economic analyses. First, Executive Order 12866 directs each Federal agency to propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic effect of regulatory changes on small entities. Third, the Office of Management and Budget directs agencies to assess the effect of regulatory changes on international trade. With respect to this final rule, the FAA has determined that it: (1) Will generate benefits that justify its costs and is a ''significant regulatory action'' as defined in the Executive Order; (2) is significant as defined in the Department of Transportation's Regulatory Policies and Procedures; (3) will not have a significant impact on a substantial number of small entities; and (4) will not constitute a barrier to international trade. Therefore, a full regulatory analysis, which includes the identification and evaluation of cost-reducing alternatives to this rule, has not been prepared. Instead, the agency has prepared a more concise analysis of this final rule in a regulatory evaluation, which is summarized in the following paragraphs.

Benefits

This rule provides benefits by reducing the amount of training aircraft flight hours. The increased substitution of on-the-ground training in flight simulators and flight training devices for in-the-air training in aircraft decreases the risk of fatal aviation accidents while training. The increased substitution also yields cost savings resulting from reduced fuel and oil consumption (energy conservation), as well as reduced required maintenance costs.

Most of the cost savings come from lowered operations costs, resulting from using simulators and training devices instead of aircraft. The estimated savings from existing simulator training centers training pilots under parts 121, 135, and 91 will be $1.2 billion ($808 million discounted) over the next 10 years. Furthermore, the final rule will generate additional savings from increased simulator training of general aviation pilots over the next decade that total $37 million ($23 million discounted). The total discounted savings attributed to reduced training aircraft flight hours equals $831 million over the next 10 years.

The FAA also estimates the value of the safety benefit at $42 million ($26 million discounted) over the same period. Thus, the total discounted value of part 142 benefits equals $857 million: $832 million resulting from greater energy conservation, and $26 million resulting from reduced training accidents.

Costs

Two elements make up the additional administrative cost of part 142: (1) The cost for organizations currently engaged in flight instruction to apply to qualify for a part 142 certificate; and (2) the cost for the government to process and to monitor those applications as well as to inspect and to train

rigid standards and requirements imposed by FAA exemptions. The costs of meeting these FAA standards and requirements are captured in this analysis as part of the operating costs of a simulator. This cost has been subtracted from the cost of in-flight training which it replaces, in computing the cost savings from simulator training.

Benefit-Cost Comparison

The preceding sections show that this final rule will result in benefits ($858 million discounted) that far exceed the costs ($1.3 million discounted) imposed by the rule. Therefore, the FAA has determined that the simulator final rule is cost beneficial.

The NPRM established the benefit-to-cost ratio as 3:1; the final rule, using a more comprehensive definition of benefits, establishes the benefit-to-cost ratio as approximately 660:1. This is explained, in part, by a reduction in total costs from approximately § 3.5 million, discounted in the NPRM estimate to approximately § 1.3 million, discounted in the final rule estimate. This reduction results from the abandoning of the concept of an FAA national field office to manage certificated simulator training centers.

Most of the increase in the benefit-cost ratio, however, is explained by the substantial increase in cost-savings benefits ($11 million, discounted NPRM estimate relative to $858 million discounted final rule estimate) resulting from a more comprehensive definition of benefits. Both the NPRM and the final rule take into account cost-saving benefits attributed to the substitution of simulator hours for training aircraft flight hours as well as to the averting of some aircraft training accidents. In the NPRM, however, the FAA only accounted for cost savings attributed to the incremental hours of simulator training substituted for general aviation pilot training. The final rule assigns cost savings to not only this subgroup, but to all parts 121, 135, and other 91 subgroups that currently provide training under exemption. Finally, the value of life used in the final rule to measure potential training accident fatalities averted was revised from $1.5 million to $2.7 million.

International Trade Impact Analysis

The FAA has determined that this rule will not have a significant impact on international trade. The FAA believes that the final rule will not negatively effect operators in the training of foreign citizens who accomplish such pilot training in the United States. Nor will the final rule have a significant impact on international trade should the training occur outside the United States, so long as the use of simulators outside the United States is in compliance with FAA standards and requirements if the intent is for U.S. pilot certification.

Final Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress to ensure that small entities are not unnecessarily and disproportionately burdened by Federal regulations. The RFA requires agencies to review rules which may have a "significant economic impact on a substantial number of small entities."

The FAA has adopted criteria and guidelines for rulemaking officials to apply when determining whether a proposed or existing rule has any significant economic impact on a substantial number of small entities. Based on these criteria, a small air carrier is one that owns nine or fewer aircraft. A small simulator training school has 10 or fewer employees. A substantial number of small entities is not less than 11 or more than one-third of affected small entities.

The FAA has determined that 37 pilot training schools and 10 contract trainers now train under exemption from specific part 61 requirements. These organizations will incur some costs in applying for part 142 certification. Most of these schools employ more than 10 employees (the small entity threshold); however, the FAA does not expect that those that do not will experience any unnecessary and disproportionate burden by Federal regulations.

ties among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this rule would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Conclusion

For the reasons discussed in the preamble, and based on the findings in the Regulatory Flexibility Determination and the International Trade Impact Analysis, the FAA has determined that this regulation is not major under Executive Order 12286 and that this rule would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. This rule is considered significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). An initial regulatory evaluation of the rule, including a Regulatory Flexibility Determination and Trade Impact Analysis, has been placed in the regulatory docket.

The Amendments

In consideration of the foregoing, the Federal Aviation Administration amends SFAR 58 and parts 1, 61, 91, 121, 125, 135, and 141 of 14 Code of Federal Regulations (14 CFR parts 1, 61, 91, 121, 125, 135, and 141) and adds part 142 (14 CFR part 142) effective August 1, 1996.

The authority citation for part 121 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

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a dispatch system) under IFR or night VFR conditions when current weather reports indicate that thunderstorms, or other potentially hazardous weather conditions that can be detected with airborne weather radar, may reasonably be expected along the route to be flown, unless the airborne weather radar equipment is in satisfactory operating condition.

(2) If the airborne weather radar becomes inoperative en route, the airplane must be operated in accordance with the approved instructions and procedures specified in the operations manual for such an event.

(d) This section does not apply to airplanes used solely within the State of Hawaii or within the State of Alaska and that part of Canada west of longitude 130 degrees W, between latitude 70 degrees N, and latitude 53 degrees N, or during any training, test, or ferry flight.

(e) Notwithstanding any other provision To obtain approval of a retrofit schedule and of this chapter, an alternate electrical power supply is not required for airborne weather radar equipment.

(Amdt. 121–18, Eff. 4/15/66); (Amdt. 121–130, Eff. 11/26/76); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.358 Low-altitude windshear system equipment requirements.

(a) *Airplanes manufactured after January 2, 1991.* No person may operate a turbine-powered airplane manufactured after January 2, 1991, unless it is equipped with either an approved airborne windshear warning and flight guidance system, an approved airborne detection and avoidance system, or an approved combination of these systems.

(b) *Airplanes manufactured before January 3, 1991.* Except as provided in paragraph (c) of this section, after January 2, 1991, no person may operate a turbine-powered airplane manufactured before January 3, 1991 unless it meets one of the following requirements as applicable.

(1) The makes/models/ series listed below must be equipped with either an approved airborne windshear warning and flight guidance system,

(vii) 13–767–all series;

(viii) F–100–all series;

(ix) MD–11–all series; and

(x) MD–80 series equipped with an EFIS and Honeywell–970 digital flight guidance computer.

(2) All other turbine-powered airplanes not listed above must be equipped with as a minimum requirement, an approved airborne windshear warning system. These airplanes may be equipped with an approved airborne windshear detection and avoidance system, or an approved combination of these systems.

(c) *Extension of the compliance date.* A certificate holder may obtain an extension of the compliance date in paragraph (b) of this section if it obtains FAA approval of a retrofit schedule. To obtain approval of a retrofit schedule and show continued compliance with that schedule, a certificate holder must do the following—

(1) Submit a request for approval of a retrofit schedule by June 1, 1990, to the Flight Standards Division Manager in the region of the certificate holding district office.

(2) Show that all of the certificate holder's airplanes required to be equipped in accordance with this section will be equipped by the final compliance date established for TCAS II retrofit.

(3) Comply with its retrofit schedule and submit status reports containing information acceptable to the Administrator. The initial report must be submitted by January 2, 1991, and subsequent reports must be submitted every six months thereafter until completion of the schedule. The reports must be submitted to the certificate holder's assigned Principal Avionics Inspector.

(d) *Definitions.* For the purposes of this section the following definitions apply—

(1) "Turbine-powered airplane" includes, e.g., turbofan-, turbojet-, propfan-, and ultrahigh bypass fan-powered airplanes. The definition specifically excludes turbopropeller-power airplanes.

(2) An airplane is considered manufactured on the date the inspection acceptance records reflect

an approved cockpit voice recorder is installed in that airplane and is operated continuously from the start of the use of the checklist (before starting engines for the purpose of flight), to completion of the final checklist at the termination of the flight.

(b) [Reserved]

(c) [The cockpit voice recorder required by paragraph (a) of this section must meet the following application standards:]

(1) The requirements of part 25 of this chapter in effect on August 31, 1977.

(2) After September 1, 1980, each recorder container must—

(i) Be either bright orange or bright yellow;

(ii) Have reflective tape affixed to the external surface to facilitate its location under water; and

(iii) Have an approved underwater locating device on or adjacent to the container which is secured in such a manner that they are not likely to be separated during crash impact, unless the cockpit voice recorder, and the flight recorder required by § 121.343, are installed adjacent to each other in such a manner that they are not likely to be separated during crash impact.

[(d) No person may operate a multiengine, turbine-powered airplane having a passenger seat configuration of 10–19 seats unless it is equipped with an approved cockpit voice recorder that:

(1) Is installed in compliance with § 23.1457(a)(1) and (2), (b), (c), (d), (e), (f), and (g); § 25.1457(a)(1) and (2), (b), (c), (d), (e), (f), and (g) of this chapter, as applicable; and

(2) Is operated continuously from the use of the checklist before the flight to completion of the final checklist at the end of the flight.

[(e) No person may operate a multiengine, turbine-powered airplane having a passenger seat configuration of 20 to 30 seats unless it is equipped with an approved cockpit voice recorder that—

(1) Is installed in compliance with § 23.1457 or § 25.1457 of this chapter, as applicable; and uninterrupted audio signals received by a boom or a mask microphone, the flight crewmembers are required to use the boom microphone below 18,000 feet mean sea level. No person may operate a large turbine-engine-powered airplane or a large pressurized airplane with four reciprocating engines manufactured after October 11, 1991, or on which a cockpit voice recorder has been installed after October 11, 1991, unless it is equipped to record the uninterrupted audio signal received by a boom or mask microphone in accordance with § 25.1457(c)(5) of this chapter.

([h]) In the event of an accident or occurrence requiring immediate notification of the National Transportation Safety Board under part 830 of its regulations, which results in the termination of the flight, the certificate holder shall keep the recorded information for at least 60 days or, if requested by the Administrator or the Board, for a longer period. Information obtained from the record is used to assist in determining the cause of accidents or occurrences in connection with investigations under part 830. The Administrator does not use the record in any civil penalty or certificate action.

(Amdt. 121–20, Eff. 6/30/66); (Amdt. 121–23, Eff. 12/1/66); (Amdt. 121–32, Eff. 10/6/67); (Amdt. 121–130, Eff. 11/26/76); (Amdt. 121–135, Eff. 9/1/77); (Amdt. 121–143, Eff. 6/26/78); (Amdt. 121–197, Eff. 10/11/88); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.360 Ground proximity warning-glide slope deviation alerting system.

[(a) No person may operate a turbine-powered airplane unless it is equipped with a ground proximity warning system that meets the performance and environmental standards of TSO–C92 or incorporates TSO-approved ground proximity warning equipment.

[(b) For the ground proximity warning system required by this section, the Airplane Flight Manual shall contain—

(1) Appropriate procedures for—

(i) The use of the equipment;

be operating.

[(c) No person may deactivate a ground proximity warning system required by this section except in accordance with the procedures contained in the Airplane Flight Manual.

[(d) Whenever a ground proximity warning system required by this section is deactivated, an entry shall be made in the airplane maintenance record that includes the date and time of deactivation.

graph (e) of this section, that incorporates equipment that meets the performance and environmental standards of TSO–C92b or is approved under that TSO, using other than Warning Envelopes 1 or 3 for Warning Modes 1 and 4.]

(Amdt. 121–114, Eff. 1/23/75); (Amdt. 121–119, Eff. 6/5/75); (Amdt. 121–122, Eff. 10/13/75); (Amdt. 121–125, Eff. 11/1/75); (Amdt. 121–126, Eff. 11/24/75); (Amdt. 121–129, Eff. 8/19/76); [(Amdt. 121–251, Eff. 1/19/96)]

This subpart prescribes airman and crewmember requirements for all certificate holders.

§ 121.383 Airman: Limitations on use of services.

(a) No certificate holder may use any person as an airman nor may any person serve as an airman unless that person—

(1) Holds an appropriate current airman certificate issued by the FAA;

(2) Has any required appropriate current airman and medical certificates in his possession while engaged in operations under this part; and

(3) Is otherwise qualified for the operation for which he is to be used.

(b) Each airman covered by paragraph (a)(2) of this section shall present either or both certificates for inspection upon the request of the Administrator.

(c) No certificate holder may use the services of any person as a pilot on an airplane engaged in operations under this part if that person has reached his 60th birthday. No person may serve as a pilot on an airplane engaged in operations under this part if that person has reached his 60th birthday.

(Amdt. 121–144, Eff. 6/26/78)

§ 121.385 Composition of flight crew.

(a) No certificate holder may operate an airplane with less than the minimum flight crew in the airworthiness certificate or the Airplane Flight Manual approved for the type airplane and required by this part for the kind of operation being conducted.

(b) In any case in which this part requires the performance of two or more functions for which an airman certificate is necessary, that requirement is not satisfied by the performance of multiple functions at the same time by one airman.

(c) [The minimum pilot crew is two pilots and the certificate holder shall designate one pilot as pilot in command and the other second in command.]

engineer, must be qualified to provide emergency performance of the flight engineer's functions for the safe completion of the flight if the flight engineer becomes ill or is otherwise incapacitated. A pilot need not hold a flight engineer's certificate to perform the flight engineer's functions in such a situation.

(Amdt. 121–178, Eff. 4/28/82); (Amdt. 121–253, Eff. 2/26/96); [(Amdt. 121–256, Eff. 7/15/96)]

§ 121.387 Flight engineer.

No certificate holder may operate an airplane for which a type certificate was issued before January 2, 1964, having a maximum certificate takeoff weight of more than 80,000 pounds without a flight crewmember holding a current flight engineer certificate. For each airplane type certificated after January 1, 1964, the requirement for a flight engineer is determined under the type certification requirements of § 25.1523.

(Amdt. 121–4, Eff. 5/28/65)

§ 121.389 Flight navigator and specialized navigation equipment.

(a) No certificate holder may operate an airplane outside the 48 contiguous States and the District of Columbia, when its position cannot be reliably fixed for a period of more than one hour, without—

(1) A flight crewmember who holds a current flight navigator certificate; or

(2) Specialized means of navigation approved in accordance with § 121.355 which enables a reliable determination to be made of the position of the airplane by each pilot seated at his duty station.

(b) Notwithstanding paragraph (a) of this section, the Administrator may also require a flight navigator or special navigation equipment, or both, when specialized means of navigation are necessary for one hour or less. In making this determination, the Administrator considers—

(1) The speed of the airplane;

(2) Normal weather conditions en route;

(9) Any other factors he determines are relevant in the interest of safety.

(c) Operations where a flight navigator or special navigation equipment, or both, are required are specified in the operations specifications of the air carrier or commercial operator.

(Amdt. 121–89, Eff. 4/29/72); (Amdt. 121–178, Eff. 4/28/82)

§ 121.391 Flight attendants.

(a) [Each certificate holder shall provide at least the following flight attendants on each passenger-carrying airplane used:

(1) [For airplanes having a maximum payload capacity of more than 7,500 pounds and having a seating capacity of more than 9 but less than 51 passengers—one flight attendant.

[(2) For airplanes having a maximum payload capacity of 7,500 pounds or less and having a seating capacity of more than 19 but less than 51 passengers—one flight attendant.]

([3]) For airplanes having a seating capacity of more than 50 but less than 101 passengers—two flight attendants.

([4]) For airplanes having a seating capacity of more than 100 passengers—two flight attendants plus one additional flight attendant for each unit (or part of a unit) of 50 passenger seats above a seating capacity of 100 passengers.

(b) If, in conducting the emergency evacuation demonstration required under § 121.291(a) or (b), the certificate holder used more flight attendants than is required under paragraph (a) of this section for the maximum seating capacity of the airplane used in the demonstration, he may not, thereafter, take off that airplane—

(1) In its maximum seating capacity configuration with fewer flight attendants than the number used during the emergency evacuation demonstration; or

(2) In any reduced seating capacity configuration with fewer flight attendants than the number required by paragraph (a) of this section for that seating capacity plus the number of flight attendants required by this section shall be located as near as practicable to required floor level exits and shall be uniformly distributed throughout the airplane in order to provide the most effective egress of passengers in event of an emergency evacuation. During taxi, flight attendants required by this section must remain at their duty stations with safety belts and shoulder harnesses fastened except to perform duties related to the safety of the airplane and its occupants.

(Amdt. 121–2, Eff. 6/7/65); (Amdt. 121–30, Eff. 10/24/67); (Amdt. 121–46, Eff. 4/23/69); (Amdt. 121–84, Eff. 5/1/72); (Amdt. 121–88, Eff. 6/15/72); (Amdt. 121–159, Eff. 8/31/80); (Amdt. 121–176, Eff. 1/18/82); (Amdt. 121–180, Eff. 1/16/83); [(Amdt. 121–251, Eff. 1/19/96)]

[§ 121.393 Crewmember requirements at stops where passengers remain on board.

[At stops where passengers remain on board, the certificate holder must meet the following requirements:

[(a) On each airplane for which a flight attendant is not required by § 121.391(a), the certificate holder must ensure that a person who is qualified in the emergency evacuation procedures for the airplane, as required in § 121.417, and who is identified to the passengers, remains:

(1) On board the airplane; or

(2) Nearby the airplane, in a position to adequately monitor passenger safety, and:

(i) The airplane engines are shut down; and

(ii) At least one floor level exit remains open to provide for the deplaning of passengers.

[(b) On each airplane for which flight attendants are required by § 121.391(a), but the number of flight attendants remaining on board is fewer than required by § 121.391(a), the certificate holder must meet the following requirements:

(1) The certificate holder shall ensure that:

(i) The airplane engines are shut down;

fied in the emergency evacuation procedures for that aircraft as required in § 121.417, if these persons are identified to the passengers.

(3) If only one flight attendant or other qualified person is on board during a stop, that flight attendant or other qualified person shall be located in accordance with the certificate holder's FAA-approved operating procedures. If more than one flight attendant or other qualified person is on board, the flight attendants or other qualified persons shall be spaced throughout the cabin to provide the most effective assistance for the evacuation in case of an emergency.]

[(Amdt. 121–251, Eff. 1/19/96)]

evacuation duties.

(a) Each certificate holder shall, for each type and model of airplane, assign to each category of required crewmember, as appropriate, the necessary functions to be performed in an emergency or a situation requiring emergency evacuation. The certificate holder shall show those functions are realistic, can be practically accomplished, and will meet any reasonably anticipated emergency including the possible incapacitation of individual crewmembers or their inability to reach the passenger cabin because of shifting cargo in combination cargo-passenger airplanes.

(b) The certificate holder shall describe in its manual the functions of each category of required crewmembers under paragraph (a) of this section.

(Amdt. 121–2, Eff. 6/7/65); (Amdt. 121–7, Eff. 8/16/65)

Source: Amdt. 121–55 (35 FR 90) Eff. 2/2/70

§ 121.400 Applicability and terms used.

(a) This subpart prescribes the requirements applicable to each certificate holder for establishing and maintaining a training program for crewmembers, aircraft dispatchers, and other operations personnel, and for the approval and use of training devices in the conduct of the program.

(b) For the purpose of this subpart, airplane groups are as follows—

(1) Group I. Propeller driven, including—

(i) Reciprocating powered; and

(ii) Turbopropeller powered.

(2) Group II. Turbojet powered.

(c) For the purpose of this subpart, the following terms and definitions apply—

(1) *Initial training.* The training required for crewmembers and dispatchers who have not qualified and served in the same capacity on another airplane of the same group.

(2) *Transition training.* The training required for crewmembers and dispatchers who have qualified and served in the same capacity on another airplane of the same group.

(3) *Upgrade training.* The training required for crewmembers who have qualified and served as second in command or flight engineer on a particular airplane type, before they serve as pilot in command or second in command, respectively, on that airplane.

(4) *Differences training.* The training required for crewmembers and dispatchers who have qualified and served on a particular type airplane, when the Administrator finds differences training is necessary before a crewmember serves in the same capacity on a particular variation of that airplane.

(5) *Programmed hours.* The hours of training prescribed in this subpart which may be reduced by the Administrator upon a showing by the certificate holder that circumstances justify a lesser amount.

(6) *Inflight.* Refers to maneuvers, procedures, or functions that must be conducted in the airplane.

[(7) *Training center.* An organization governed by the applicable requirements of part 142 of this chapter that provides training, testing, and checking under contract or other arrangement to certificate holders subject to the requirements of this part.

[(8) *Requalification training.* The training required for crewmembers previously trained and qualified, but who have become unqualified due to not having met within the required period the recurrent training requirements of § 121.427 or the proficiency check requirements of § 121.441.]

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–104, Eff. 7/6/73); [(Amdt. 121–259, Eff. 8/1/96)]

§ 121.401 Training program: General.

(a) Each certificate holder shall—

(1) Establish, obtain the appropriate initial and final approval of, and provide, a training program that meets the requirements of this subpart and appendices E and F and that insures that each crewmember, aircraft dispatcher, flight instructor and check airman, and each person assigned duties for the carriage and handing of dangerous articles and magnetized materials, is adequately trained to perform his assigned duties.

(2) Provide adequate ground and flight training facilities and properly qualified ground instructors for the training required by this subpart;

(3) Provide and keep current with respect to each airplane type and, if applicable, the particular variations within that airplane type, appropriate training material, examinations, forms, instructions, and procedures for use in conducting the training and checks required by this part; and

(4) Provide enough flight instructors, simulator instructors, and approved check airmen to conduct required flight training and flight checks, and simulator training courses permitted under this part.

(c) Each instructor, supervisor, or check airman who is responsible for a particular ground training subject, segment of flight training, course of training, flight check, or competence check under this part shall certify as to the proficiency and knowledge of the crewmember, aircraft dispatcher, flight instructor, or check airman concerned upon completion of that training or check. That certification shall be made a part of the crewmember's or dispatcher's record. When the certification required by this paragraph is made by an entry in a computerized recordkeeping system, the certifying instructor, supervisor, or check airman must be identified with that entry. However, the signature of the certifying instructor, supervisor, or check airman is not required for computerized entries.

(d) Training subjects that are applicable to more than one airplane or crewmember position and that have been satisfactorily completed in connection with prior training for another airplane or another crewmember position, need not be repeated during subsequent training other than recurrent training.

(e) A person who progresses successfully through flight training, is recommended by his instructor or a check airman, and successfully completes the appropriate flight check for a check airman or the Administrator, need not complete the programmed hours of flight training for the particular airplane. However, whenever the Administrator finds that 20 percent of the flight checks given at a particular training base during the previous six months under this paragraph are unsuccessful, this paragraph may not be used by the certificate holder at that base until the Administrator finds that the effectiveness of the flight training there has improved.

In the case of a certificate holder using a course of training permitted in § 121.409(c), the Administrator may require the programmed hours of inflight training in whole or in part, until he finds the effectiveness of the flight training has improved as provided in paragraph (e) of this section.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–104, Eff. 7/6/73); (Amdt. 121–143, Eff. 12/19/74); (Amdt. 121–1743 Eff. 6/26/78)

[(b) A certificate holder may contract with, or otherwise arrange to use the services of, a training center certificated under part 142 of this chapter to provide training, testing, and checking required by this part only if the training center—

[(1) Holds applicable training specifications issued under part 142 of this chapter;

[(2) Has facilities, training equipment, and courseware meeting the applicable requirements of part 142 of this chapter;

[(3) Has approved curriculums, curriculum segments, and portions of curriculum segments applicable for use in training courses required by this subpart; and

[(4) Has sufficient instructor and check airmen qualified under the applicable requirements of §§ 121.411 or 121.413 to provide training, testing, and checking to persons subject to the requirements of this subpart.]

[(Amdt. 121–259, Eff. 8/1/96)]

§ 121.403 Training program: Curriculum.

(a) Each certificate holder must prepare and keep current a written training program curriculum for each type of airplane with respect to dispatchers and each crewmember required for that type airplane. The curriculum must include ground and flight training required by this subpart.

(b) Each training program curriculum must include—

(1) A list of principal ground training subjects, including emergency training subjects, that are provided.

(2) A list of all the training devices, mockups, systems trainers, procedures trainers, or other training aids that the certificate holder will use.

(3) Detailed descriptions or pictorial displays of the approved normal, abnormal, and emergency maneuvers, procedures and functions that will be performed during each flight training phase or flight check, indicating those maneuvers, procedures and functions that are to be performed during the inflight portions of flight training and flight checks.

(Amdt. 121–55, Eff. 2/2/70)

§ 121.404 Compliance dates: Crew and dispatcher resource management training.

After March 19, [1998], no certificate holder may use a person as a flight crewmember, and after March 19, 1999, no certificate holder may use a person as a flight attendant or aircraft dispatcher unless that person has completed approved crew resource management (CRM) or dispatcher resource management (DRM) initial training, as applicable, with that certificate holder or with another certificate holder.

Docket No. 19110 (53 FR 37696) Eff. 9/27/88

(Amdt. 121–199, Eff. 1/2/89); (Amdt. 121–250, Eff. 3/19/96); (Amdt. 121–253, Eff. 2/26/96); (Amdt. 121–253 Corrected, Eff. 3/11/96); [(Amdt. 121–256, Eff. 7/15/96)]

§ 121.405 Training program and revision: Initial and final approval.

(a) To obtain initial and final approval of a training program, or a revision to an approved training program, each certificate holder must submit to the Administrator—

(1) An outline of the proposed program or revision, including an outline of the proposed or revised curriculum, that provides enough information for a preliminary evaluation of the proposed training program or revised training program; and

(2) Additional relevant information as may be requested by the Administrator.

(b) If the proposed training program or revision complies with this subpart, the Administrator grants initial approval in writing after which the certificate holder may conduct the training in accordance with that program. The Administrator then evaluates the effectiveness of the training program and advises the certificate holder of deficiencies, if any, that must be corrected.

(c) The Administrator grants final approval of the training program or revision if the certificate

methods, and procedures listed in the certificate holder's curriculum as set forth in § 121.403 that increase the quality and effectiveness of the teaching-learning process.

If approval of the reduced programmed hours of training is granted, the Administrator provides the certificate holder with a statement of the basis for the approval.

(e) Whenever the Administrator finds that revisions are necessary for the continued adequacy of a training program that has been granted final approval, the certificate holder shall, after notification by the Administrator, make any changes in the program that are found necessary by the Administrator. Within 30 days after the certificate holder receives such notice, it may file a petition to reconsider the notice with the [certificate-holding district office.]* The filing of a petition to reconsider stays the notice pending a decision by the Administrator. However, if the Administrator finds that there is an emergency that requires immediate action in the interest of safety in air transportation, he may, upon a statement of the reasons, require a change effective without stay.

[(f) Each certificate holder described in § 135.3(b) and (c) of this chapter must include the material required by § 121.403 in the manual required by § 135.21 of this chapter.

[(g) The Administrator may grant a deviation to certificate holders described in § 135.3(b) and (c) of this chapter to allow reduced programmed hours of ground training required by § 121.419 if it is found that a reduction is warranted based on the certificate holder's operations and the complexity of the make, model, and series of the aircraft used.]

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–207, Eff. 10/25/89); [(Amdt. 121–250, Eff. 3/19/96)]; [*(Amdt. 121–253, Eff. 2/26/96)]

§ 121.406 [Credit for previous CRM/DRM training.]

(a) For flightcrew members, the Administrator may credit CRM training received before March

CRM training required by § 121.422.

(d) In granting credit for initial ground CRM or DRM training, the Administrator considers training aids, devices, methods, and procedures used by the certificate holder in a voluntary CRM or DRM program or in an AQP program that effectively meets the quality of an approved CRM or DRM initial ground training program under § 121.419, 121.421, or 121.422 as appropriate.

(Amdt. 121–250, Eff. 3/19/96); [(Amdt. 121–256, Eff. 7/15/96)]

§ 121.407 Training program: Approval of airplane simulators and other training devices.

(a) Each airplane simulator and other training device that is used in a training course permitted under § 121.409, in checks required under subpart O of this part or as permitted in appendices E and F to this part must—

(1) Be specifically approved for—

(i) The certificate holder;

(ii) The type airplane and, if applicable, the particular variation within type, for which the training or check is being conducted; and

(iii) The particular maneuver, procedure, or crewmember function involved.

(2) Maintain the performance, functional, and other characteristics that are required for approval.

(3) Be modified to confirm with any modification to the airplane being simulated that results in changes to performance, functional, or other characteristics required for approval.

(4) Be given a daily functional preflight check before being used.

(5) Have a daily discrepancy log kept with each discrepancy entered in that log by the appropriate instructor or check airman at the end of each training or check flight.

(b) A particular airplane simulator or other training device may be approved for use by more than one certificate holder.

§ 121.424(a) and (c) and appendix H of this part.

(d) An airplane simulator approved under this section must be used instead of the airplane to satisfy the pilot flight training requirements prescribed in the certificate holder's approved low-altitude windshear flight training program set forth in § 121.409(d) of this part.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–161, Eff. 7/30/80); (Amdt. 121–199, Eff. 1/2/89)

§ 121.409 Training courses using airplane simulators and other training devices.

(a) Training courses utilizing airplane simulators and other training devices may be included in the certificate holder's approved training program for use as provided in this section.

(b) A course of training in an airplane simulator may be included for use as provided in § 121.441 if that course—

(1) Provides at least 4 hours of training at the pilot controls of an airplane simulator as well as a proper briefing before and after the training;

(2) Provides training in at least the procedures and maneuvers set forth in appendix F to this part; or

(3) Provides line-oriented training that—

(i) Utilizes a complete flight crew;

(ii) Includes at least the maneuvers and procedures (abnormal and emergency) that may be expected in line operations;

(iii) Is representative of the flight segment appropriate to the operations being conducted by the certificate holder; and

(4) Is given by an instructor who meets the applicable requirements of § 121.411.

The satisfactory completion of the course of training must be certified by either the Administrator or a qualified check airman.

(c) The programmed hours of flight training set forth in this subpart do not apply if the training program for the airplane type includes—

(1) A course of pilot training in an airplane simulator as provided in § 121.424(d); or

flight training program. The approved low-altitude windshear flight training, if applicable, must be included in each of the pilot flight training courses prescribed in §§ 121.409(b), 121.418, 121.424, and 121.427 of this part.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–130, Eff. 11/26/76); (Amdt. 121–144, Eff. 6/26/78); (Amdt. 121–199, Eff. 1/2/89)

§ 121.411 [Qualifications: Check airmen (airplane) and check airmen (simulator).]

(a) [For the purposes of this section and § 121.413:

(1) A check airman (airplane) is a person who is qualified, and permitted, to conduct flight checks or instruction in an airplane, in a flight simulator, or in a flight training device for a particular type airplane.

(2) A check airman (simulator) is a person who is qualified to conduct flight checks or instruction, but only in a flight simulator or in a flight training device for a particular type airplane.

(3) Check airmen (airplane) and check airmen (simulator) are those check airmen who perform the functions described in § 121.401(a)(4).

(b) [No certificate holder may use a person, nor may any person serve as a check airman (airplane) in a training program established under this subpart unless, with respect to the airplane type involved, that person—

(1) Holds the airman certificates and ratings required to serve as a pilot in command, a flight engineer, or a flight navigator, as applicable, in operations under this part;

(2) Has satisfactorily completed the appropriate training phases for the airplane, including recurrent training, that are required to serve as a pilot in command, flight engineer, or flight navigator, as applicable, in operations under this part;

(3) Has satisfactorily completed the appropriate proficiency or competency checks that are required to serve as a pilot in command, flight certificate as appropriate;

(6) Has satisfied the recency of experience requirements of § 121.439; and

(7) Has been approved by the Administrator for the check airman duties involved.

(c) [No certificate holder may use a person nor may any person serve as a check airman (simulator) in a training program established under this subpart unless, with respect to the airplane type involved, that person meets the provisions of paragraph (b) of this section, or—

(1) Holds the airman certificates and ratings, except medical certificate, required to serve as a pilot in command, a flight engineer, or a flight navigator, as applicable, in operations under this part;

(2) Has satisfactorily completed the appropriate training phases for the airplane, including recurrent training, that are required to serve as a pilot in command, flight engineer, or flight navigator in operations under this part;

(3) Has satisfactorily completed the appropriate proficiency or competency checks that are required to serve as a pilot in command, flight engineer, or flight navigator in operations under this part;

(4) Has satisfactorily completed the applicable training requirements of § 121.413; and

(5) Has been approved by the Administrator for the check airman (simulator) duties involved.

[(d) Completion of the requirements in paragraphs (b)(2), (3), and (4) or (c)(2), (3), and (4) of this section, as applicable, shall be entered in the individual's training record maintained by the certificate holder.

[(e) Check airmen who have reached their 60th birthday or who do not hold an appropriate medical certificate may function as check airmen, but may not serve as pilot flightcrew members in operations under this part.

[(f) A check airman (simulator) must accomplish the following—

(1) Fly at least two flight segments as a required crewmember for the type airplane involved within the 12-month period preceding

considered to be completed in the month required if completed in the calendar month before or in the calendar month after the month in which it is due.]

(Amdt. 121–55, Eff. 2/2/70); [(Amdt. 121–257, Eff. 6/17/96)]

[§ 121.412 Qualifications: Flight instructors (airplane) and flight instructors (simulator).

[(a) For the purposes of this section and § 121.414:

(1) A flight instructor (airplane) is a person who is qualified to instruct in an airplane, in a flight simulator, or in a flight training device for a particular type airplane.

(2) A flight instructor (simulator) is a person who is qualified to instruct, but only in a flight simulator, in a flight training device, or both, for a particular type airplane.

(3) Flight instructors (airplane) and flight instructors (simulator) are those instructors who perform the functions described in § 121.401(a)(4).

[(b) No certificate holder may use a person nor may any person serve as a flight instructor (airplane) in a training program established under this subpart unless, with respect to the airplane type involved, that person—

(1) Holds the airman certificates and ratings required to serve as a pilot in command, a flight engineer, or a flight navigator, as applicable, in operations under this part;

(2) Has satisfactorily completed the appropriate training phases for the airplane, including recurrent training, that are required to serve as a pilot in command, flight engineer, or flight navigator, as applicable, in operations under this part;

(3) Has satisfactorily completed the appropriate proficiency or competency checks that are required to serve as a pilot in command, flight engineer, or flight navigator, as applicable, in operations under this part;

(4) Has satisfactorily completed the applicable training requirements of § 121.414, including in-

[(c) No certificate holder may use a person, nor may any person serve as a flight instructor (simulator) in a training program established under this subpart, unless, with respect to the airplane type involved, that person meets the provisions of paragraph (b) of this section, or—

(1) Holds the airman certificates and ratings, except medical certificate, required to serve as a pilot in command, a flight engineer, or a flight navigator, as applicable, in operations under this part except before February 19, 1997 that person need not hold a type rating for the airplane type involved provided that he or she only provides the instruction described in §§ 121.409(b) and 121.441;

(2) Has satisfactorily completed the appropriate training phases for the airplane, including recurrent training, that are required to serve as a pilot in command, flight engineer, or flight navigator, as applicable, in operations under this part;

(3) Has satisfactorily completed the appropriate proficiency or competency checks that are required to serve as a pilot in command, flight engineer, or flight navigator, as applicable, in operations under this part; and

(4) Has satisfactorily completed the applicable training requirements of § 121.414.

[(d) Completion of the requirements in paragraphs (b)(2), (3), and (4) or (c)(2), (3), and (4) of this section as applicable shall be entered in the individual's training record maintained by the certificate holder.

[(e) Airmen who have reached their 60th birthday, or who do not hold an appropriate medical certificate, may not function as a flight instructor (airplane), nor may they serve as pilot flightcrew members in operations under this part.

[(f) A flight instructor (simulator) must accomplish the following—

(1) Fly at least two flight segments as a required crewmember for the type of airplane within the 12-month period preceding the performance of any flight instructor duty in a flight simulator (and must hold a Class I or Class II medical certificate as appropriate); or

month after the month in which it is due.]

[(Amdt. 121–257, Eff. 6/17/96)]

§ 121.413 [Initial and transition training and checking requirements: Check airmen (airplane), check airmen (simulator).

(a) [No certificate holder may use a person nor may any person serve as a check airman unless—

(1) That person has satisfactorily completed initial or transition check airman training; and

(2) Within the preceding 24 calendar months that person satisfactorily conducts a proficiency or competency check under the observation of an FAA inspector or an aircrew designated examiner employed by the operator. The observation check may be accomplished in part or in full in an airplane, in a flight simulator, or in a flight training device. This paragraph applies after February 19, 1997.

(b) [The observation check required by paragraph (a)(2) of this section is considered to have been completed in the month required if completed in the calendar month before, or the calendar month after, the month in which it is due.

(c) [The initial ground training for check airmen must include the following:

(1) Check airman duties, functions, and responsibilities.

(2) The applicable Code of Federal Regulations and the certificate holder's policies and procedures.

(3) The appropriate methods, procedures, and techniques for conducting the required checks.

(4) Proper evaluation of student performance including the detection of—

(i) Improper and insufficient training; and

(ii) Personal characteristics of an applicant that could adversely affect safety.

(5) The appropriate corrective action in the case of unsatisfactory checks.

(6) The approved methods, procedures, and limitations for performing the required normal,

[(e) The initial and transition flight training for pilot check airmen (airplane), flight engineer check airmen (airplane), and flight navigator check airmen (airplane) must include the following:

(1) The safety measures for emergency situations that are likely to develop during a check.

(2) The potential results of improper, untimely, or non-execution of safety measures during a check.

(3) For pilot check airman (airplane)—

(i) Training and practice in conducting flight checks from the left and right pilot seats in the required normal, abnormal, and emergency procedures to ensure competence to conduct the pilot flight checks required by this part; and

(ii) The safety measures to be taken from either pilot seat for emergency situations that are likely to develop during a check.

(4) For flight engineer check airmen (airplane) and flight navigator check airmen (airplane), training to ensure competence to perform assigned duties.

[(f) The requirements of paragraph (e) of this section may be accomplished in full or in part in flight, in a flight simulator, or in a flight training device, as appropriate.

[(g) The initial and transition flight training for check airmen (simulator) must include the following:

(1) Training and practice in conducting flight checks in the required normal, abnormal, and emergency procedures to ensure competence to conduct the flight checks required by this part. This training and practice must be accomplished in a flight simulator or in a flight training device.

(2) Training in the operation of flight simulators or flight training devices, or both, to ensure competence to conduct the flight checks required by this part.]

(Amdt. 121–55, Eff. 2/2/70); [(Amdt. 121–257, Eff. 6/17/96)]

(2) Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an FAA inspector, an operator check airman, or an aircrew designated examiner employed by the operator. The observation check may be accomplished in part or in full in an airplane, in a flight simulator, or in a flight training device. This paragraph applies after February 19, 1997.

[(b) The observation check required by paragraph (a)(2) of this section is considered to have been completed in the month required if completed in the calendar month before, or the calendar month after, the month in which it is due.

[(c) The initial ground training for flight instructors must include the following:

(1) Flight instructor duties, functions, and responsibilities.

(2) The applicable Code of Federal Regulations and the certificate holder's policies and procedures.

(3) The appropriate methods, procedures, and techniques for conducting flight instruction.

(4) Proper evaluation of student performance including the detection of—

(i) Improper and insufficient training; and

(ii) Personal characteristics of an applicant that could adversely affect safety.

(5) The corrective action in the case of unsatisfactory training progress.

(6) The approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the airplane.

(7) Except for holders of a flight instructor certificate—

(i) The fundamental principles of the teaching-learning process;

(ii) Teaching methods and procedures; and

(iii) The instructor-student relationship.

[(d) The transition ground training for flight instructors must include the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the airplane. This training must include—

(1) The potential results of improper, untimely, or non-execution of safety measures during instruction.

(2) The potential results of improper, untimely, or non-execution of safety measures during instruction.

(3) For pilot flight instructor (airplane)—

(i) In-flight training and practice in conducting flight instruction from the left and right pilot seats in the required normal, abnormal, and emergency procedures to ensure competence as an instructor; and

(ii) The safety measures to be taken from either pilot seat for emergency situations that are likely to develop during instruction.

(4) For flight engineer instructors (airplane) and flight navigator instructors (airplane), in-flight training to ensure competence to perform assigned duties.

[(f) The requirements of paragraph (e) of this section may be accomplished in full or in part in flight, in a flight simulator, or in a flight training device, as appropriate.

[(g) The initial and transition flight training for flight instructors (simulator) must include the following:

(1) Training and practice in the required normal, abnormal, and emergency procedures to ensure competence to conduct the flight instruction required by this part. This training and practice must be accomplished in full or in part in a flight simulator or in a flight training device.

(2) Training in the operation of flight simulators or flight training devices, or both, to ensure competence to conduct the flight instruction required by this part.]

[(Amdt. 121–257, Eff. 6/17/96)]

§ 121.415 Crewmember and dispatcher training requirements.

(a) Each training program must provide the following ground training as appropriate to the particular assignment of the crewmember or dispatcher—

(1) Basic indoctrination ground training for newly hired crewmembers or dispatchers including 40 programmed hours of instruction, unless reduced under § 121.405 or as specified in § 121.401(d), in at least the following—

holder's operating manual.

(2) The initial and transition ground training specified in §§ 121.419 through 121.422, as applicable.

(3) Emergency training as specified in § 121.417 (not required for dispatchers).

(b) Each training program must provide the flight training specified in §§ 121.424 through 121.426, as applicable.

(c) Each training program must provide recurrent ground and flight training as provided in § 121.427.

(d) Each training program must provide the differences training specified in § 121.418 if the Administrator finds that, due to differences between airplanes of the same type operated by the certificate holder, additional training is necessary to ensure that each crewmember and dispatcher is adequately trained to perform his assigned duties.

(e) Upgrade training as specified in §§ 121.419 and 121.424 for a particular type airplane may be included in the training program for crewmembers who have qualified and served as second in command pilot or flight engineer on that airplane.

(f) Particular subjects, maneuvers, procedures or parts thereof specified in §§ 121.419 through 121.425 for transition or upgrade training, as applicable, may be omitted, or the programmed hours of ground instruction or inflight training may be reduced, as provided in § 121.405.

(g) In addition to initial, transition, upgrade, recurrent and differences training, each training program must also provide ground and flight training, instruction, and practice as necessary to ensure that each crewmember and dispatcher—

(1) Remains adequately trained and currently proficient with respect to each airplane, crewmember position, and type of operation in which he serves; and

(2) Qualifies in new equipment, facilities, procedures, and techniques, including modifications to airplanes.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–130, Eff. 11/26/76)

ing—

(1) Instruction in emergency assignments and procedures, including coordination among crewmembers.

(2) Individual instruction in the location, function, and operation of emergency equipment including—

(i) Equipment used in ditching and evacuation;

(ii) First aid equipment and its proper use;

(iii) Portable fire extinguishers, with emphasis on type of extinguisher to be used on different classes of fires; and

(iv) Emergency exits in the emergency mode with the evacuation slide/raft pack attached (if applicable), with training emphasis on the operation of the exits under adverse conditions.

(3) Instruction in the handling of emergency situations including—

(i) Rapid decompression;

(ii) Fire in flight or on the surface, and smoke control procedures with emphasis on electrical equipment and related circuit breakers found in cabin areas including all galleys, service centers, lifts, lavatories and movie screens;

(iii) Ditching and other evacuations, including the evacuation of persons and their attendants, if any, who may need the assistance of another person to move expeditiously to an exit in the event of an emergency;

(iv) Illness, injury, or other abnormal situations involving passengers or crewmembers to include familiarization with the emergency medical kit; and

(v) Hijacking and other unusual situations.

(4) Review and discussion of previous aircraft accidents and incidents pertaining to actual emergency situations.

(c) Each crewmember must accomplish the following emergency training during the specified training periods, using those items of installed emergency equipment for each type of airplane in which he or she is to serve (Alternate recurrent

member combats an actual or simulated fire using at least one type of installed hand fire extinguisher or approved fire extinguisher that is appropriate for the type of actual fire or simulated fire to be fought while using the type of installed PBE required by § 121.337 or approved PBE simulation device as defined by paragraph (d) of this section for combating fires aboard airplanes;]

(ii) [At least one approved firefighting drill in which the crewmember combats an actual fire using at least one type of installed hand fire extinguisher or approved fire extinguisher that is appropriate for the type of fire to be fought. This firefighting drill is not required if the crewmember performs the PBE drill of paragraph (c)(1)(i) by combatting an actual fire; and]

([iii]) An emergency evacuation drill with each person egressing the airplane or approved training device using at least one type of installed emergency evacuation slide. The crewmember may either observe the airplane exits being opened in the emergency mode and the associated exit slide/raft pack being deployed and inflated, or perform the tasks resulting in the accomplishment of these actions.

(2) Additional emergency drill requirements to be accomplished during initial training and once each 24 calendar months during recurrent training. Each crewmember must—

(i) Perform the following emergency drills and operate the following equipment—

(A) Each type of emergency exit in the normal and emergency modes, including the actions and forces required in the deployment of the emergency evacuation slides;

(B) Each type of installed hand fire extinguisher:

(C) Each type of emergency oxygen system to include protective breathing equipment;

(D) Donning, use, and inflation of individual flotation means, if applicable; and

(5) Use of life-lines; and

(6) Boarding of passengers and crew into raft or a slide/raft pack.

(ii) Observe the following drills—

(A) Removal from the airplane (or training device) and inflation of each type of life raft, if applicable;

(B) Transfer of each type of slide/raft pack from one door to another;

(C) Deployment, inflation, and detachment from the airplane (or training device) of each type of slide/raft pack; and

(D) Emergency evacuation including the use of a slide.

(d) [After September 1, 1993, no crewmember may serve in operations under this part unless that crewmember has performed the PBE drill and the firefighting drill described by paragraph (c)(1)(i) and (c)(1)(ii) of this section, as part of a one-time training requirement of paragraphs (c)(1) or (c)(2) of this section as appropriate. Any crewmember who performs the PBE drill and the firefighting drill prescribed in paragraphs (c)(1)(i) and (c)(1)(ii) of this section after May 26m 1987, is deemed to be in compliance with this regulation upon presentation of information or documentation, in a form and manner acceptable to the Director, Flight Standards Service, showing that the appropriate drills have been accomplished.]

(e) Crewmembers who serve in operation above 25,000 feet must receive instruction in the following—

(1) Respiration.

(2) Hypoxia.

(3) Duration of consciousness without supplemental oxygen at altitude.

(4) Gas expansion.

(5) Gas bubble formation.

(6) Physical phenomena and incidents of decompression.

(f) [For the purposes of this section the following definitions apply;

[(1) *Actual fire* means an ignited combustible material, in controlled conditions, of sufficient magnitude and duration to accomplish the training

requirements of § 121.417(c).

(4) *Combats,* in this context, means to properly fight an actual or simulated fire using an appropriate type of fire extinguisher until that fire is extinguished.

(5) *Observe* means to watch without participating actively in the drill.

(6) *PBE drill* means an emergency drill in which a crewmember demonstrates the proper use of protective breathing equipment while fighting an actual or simulated fire.

(7) *Perform* means to satisfactorily accomplish a prescribed emergency drill using established procedures that stress the skill of the persons involved in the drill.

(8) *Simulated fire* means an artificial duplication of smoke or flame used to create various aircraft firefighting scenarios, such as lavatory, galley oven, and aircraft seat fires.]

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–133, Eff. 5/16/77); (Amdt. 121–144, Eff. 2/26/78); (Amdt. 121–146, Eff. 6/22/78); (Amdt. 121–148, Eff. 9/29/78); (Amdt. 121–151, Eff. 4/23/79); (Amdt. 121–179, Eff. 10/1/82); (Amdt. 121–188, Eff. 8/1/86); (Amdt. 121–193, Eff. 7/6/87); (Amdt. 121–204, Eff. 5/22/89); (Amdt. 121–220, Eff. 12/11/90); [(Amdt. 121–234, Eff. 9/1/93)]

§ 12.418 Differences training: Crewmembers and dispatchers.

(a) Differences training for crewmembers and dispatchers must consist of at least the following as applicable to their assigned duties and responsibilities—

(1) Instruction in each appropriate subject or part thereof required for initial ground training in the airplane unless the Administrator finds that particular subjects are not necessary.

(2) Flight training in each appropriate maneuver or procedure required for initial flight training in the airplane unless the Administrator finds that particular maneuvers or procedures are not necessary.

(3) The number of programmed hours of ground and flight training determined by the

§ 121.419 Pilots and flight engineers: Initial, transition, and upgrade ground training.

(a) Initial, transition, and upgrade ground training for pilots and flight engineers must include instruction in at least the following as applicable to their assigned duties—

(1) General subjects—

(i) The certificate holder's dispatch or flight release procedures;

(ii) Principles and methods for determining weight and balance, and runway limitations for takeoff and landing;

(iii) Enough meteorology to ensure a practical knowledge of weather phenomena, including the principles of frontal systems, icing, fog, thunderstorms, and high altitude weather situations;

(iv) Air traffic control systems, procedures, and phraseology;

(v) Navigation and the use of navigation aids, including instrument approach procedures;

(vi) Normal and emergency communication procedures;

(vii) [Visual cues prior to and during descent below DH or MDA;

[(viii) Approved crew resource management initial training; and]

[(ix)] Other instructions as necessary to ensure his competence.

(2) For each airplane type—

(i) A general description;

(ii) Performance characteristics;

(iii) Engines and propellers;

(iv) Major components;

(v) Major airplane systems (i.e., flight controls, electrical, hydraulic); other systems as appropriate; principles of normal, abnormal, and emergency operations; appropriate procedures and limitations;

(vi) Procedures for—

(A) Recognizing and avoiding severe weather situations;

(viii) Fuel consumption and cruise control;

(ix) Flight planning;

(x) Each normal and emergency procedure; and

(xi) The approved Airplane Flight Manual.

(b) Initial ground training for pilots and flight engineers must consist of at least the following programmed hours of instruction in the required subjects specified in paragraph (a) of this section and in § 121.415(a) unless reduced under § 121.405—

(1) Group I airplanes—

(i) Reciprocating powered, 64 hours; and

(ii) Turbopropeller powered, 80 hours.

(2) Group II airplanes, 120 hours.

(Amdt. 121–10, Eff. 8/16/65); (Amdt. 121–24, Eff. 4/15/67); (Amdt. 121–26, Eff. 4/15/67); (Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–199, Eff. 1/2/89); [(Amdt. 121–250, Eff. 3/19/96)]

§ 121.420 Flight navigators: Initial and transition ground training.

(a) Initial and transition ground training for flight navigators must include instruction in the subjects specified in § 121.419(a) as appropriate to his assigned duties and responsibilities and in the following with respect to the particular type airplane—

(1) Limitations on climb, cruise, and descent speeds.

(2) Each item of navigational equipment installed including appropriate radio, radar, and other electronic equipment.

(3) Airplane performance.

(4) Airspeed, temperature, and pressure indicating instruments or systems.

(5) Compass limitations and methods of compensation.

(6) Cruise control charts and data, including fuel consumption rates.

(7) Any other instruction as necessary to ensure his competence.

(b) Initial ground training for flight navigators must consist of at least the following programmed hours of instruction in the subjects specified in

§ 121.421 Flight attendants: Initial and transition ground training.

(a) Initial and transition ground training for flight attendants must include instruction in at least the following—

(1) General subjects—

(i) [The authority of the pilot-in-command;

(ii) [Passenger handling, including the procedures to be followed in the case of deranged persons or other persons whose conduct might jeopardize safety; and

[(iii) Approved crew resource management initial training.]

(2) For each airplane type—

(i) A general description of the airplane emphasizing physical characteristics that may have a bearing on ditching, evacuation, and inflight emergency procedures and on other related duties;

(ii) The use of both the public address system and the means of communicating with other flight crewmembers, including emergency means in the case of attempted hijacking or other unusual situations; and

(iii) Proper use of electrical galley equipment and the controls for cabin heat and ventilation.

(b) Initial and transition ground training for flight attendants must include a competence check to determine ability to perform assigned duties and responsibilities.

(c) Initial ground for flight attendants must consist of at least the following programmed hours of instruction in the subjects specified in paragraph (a) of this section and in § 121.415(a) unless reduced under—

(1) Group I airplanes—

(i) Reciprocating powered, 8 hours; and

(ii) Turbopropeller powered, 8 hours;

(2) Group II airplanes, 16 hours.

(Amdt. 121–55, Eff. 2/2/70); [(Amdt. 121–250, Eff. 3/19/96)]

(ii) Meteorology, including various types of meteorological information and forecasts, interpretation of weather data (including forecasting of en route and terminal temperatures and other weather conditions), frontal systems, wind conditions, and use of actual and prognostic weather charts for various altitudes;

(iii) The NOTAM system;

(iv) Navigational aids and publications;

(v) Joint dispatcher-pilot responsibilities;

(vi) Characteristics of appropriate airports;

(vii) [Prevailing weather phenomena and the available sources of weather information;

(viii) [Air traffic control and instrument approach procedures; and

[(ix) Approved dispatcher resource management (DRM) initial training.]

(2) For each airplane—

(i) A general description of the airplane emphasizing operating and performance characteristics, navigation equipment, instrument approach and communication equipment, emergency equipment and procedures, and other subjects having a bearing on dispatcher duties and responsibilities;

(ii) Flight operation procedures including procedures specified in § 121.419 (a)(2)(vi);

(iii) Weight and balance computations;

(iv) Basic airplane performance dispatch requirements and procedures;

(v) Flight planning including track selection, flight time analysis, and fuel requirements; and

(vi) Emergency procedures.

(3) Emergency procedures must be emphasized, including the alerting of proper governmental, company, and private agencies during emergencies to give maximum help to an airplane in distress.

(b) Initial and transition ground training for aircraft dispatchers must include a competence check given by an appropriate supervisor or ground instructor that demonstrates knowledge and ability with the subjects set forth in paragraph (a) of this section.

(Amdt. 121–55, Eff. 2/2/70); [(Amdt. 121–250, Eff. 3/19/96)]

§ 121.424 Pilots: Initial, transition, and upgrade flight training.

(a) Initial, transition, and upgrade training for pilots must include flight training and practice in the maneuvers and procedures set forth in the certificate holder's approved low-altitude windshear flight training program and in appendix E to this part, as applicable.

(b) The maneuvers and procedures required by paragraph (a) of this section must be performed inflight except—

(1) That windshear maneuvers and procedures must be performed in a simulator in which the maneuvers and procedures are specifically authorized to be accomplished; and

(2) To the extent that certain maneuvers and procedures may be performed in an airplane simulator, an appropriate training device, or a static airplane as permitted in appendix E to this part.

(c) Except as permitted in paragraph (d) of this section, the initial flight training required by paragraph (a) of this section must include at least the following programmed hours of inflight training and practice unless reduced under § 121.405—

(1) Group I airplanes—

(i) Reciprocating powered. Pilot in command, 10 hours; second in command, 6 hours; and

(ii) Turbopropeller powered. Pilot in command, 15 hours; second in command, 7 hours.

(2) Group II airplanes. Pilot in command, 20 hours; second in command, 10 hours.

(d) If the certificate holder's approved training program includes a course of training utilizing an airplane simulator under § 121.409 (c) and (d) of this part, each pilot must successfully complete—

(1) With respect to § 121.409(c) of this part—

(i) Training and practice in the simulator in at least all of the maneuvers and procedures set forth in appendix E to this part for initial flight training that are capable of being performed in

(2) With respect to § 121.409(d) of this part, training and practice in at least the maneuvers and procedures set forth in the certificate holder's approved low-altitude windshear flight training program that are capable of being performed in an airplane simulator in which the maneuvers and procedures are specifically authorized.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–199, Eff. 1/2/89)

§ 121.425 Flight engineers: Initial and transition flight training.

(a) Initial and transition flight training for flight engineers must include at least the following—

(1) Training and practice in procedures related to the carrying out of flight engineer duties and functions. This training and practice may be accomplished either inflight, in an airplane simulator, or in a training device.

(2) A flight check that includes—

(i) Preflight inspection;

(ii) Inflight performance of assigned duties accomplished from the flight engineer station during taxi, runup, takeoff, climb, cruise, descent, approach, and landing;

(iii) Accomplishment of other functions, such as fuel management and preparation of fuel consumption records, and normal and emergency or alternate operation of all airplane flight systems, performed either inflight, in an airplane simulator, or in a training device.

Flight engineers possessing a commercial pilot certificate with an instrument, category and class rating, or pilots already qualified as second in command and reverting to flight engineer, may complete the entire flight check in an approved airplane simulator.

(b) Except as permitted in paragraph (c) of this section, the initial flight training required by paragraph (a) of this section must include at least the same number of programmed hours of flight training and practice that are specified for a second in command pilot under § 121.424(c) unless reduced under § 121.405.

of proficiency in the assigned duties, procedures, and functions.

(Amdt. 121–3, Eff. 4/1/65); (Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–144, Eff. 6/26/78)

§ 121.426 Flight navigators: Initial and transition flight training.

(a) Initial and transition flight training for flight navigators must include flight training and a flight check that are adequate to ensure his proficiency in the performance of his assigned duties.

(b) The flight training and checks specified in paragraph (a) of this section must be performed—

(1) Inflight or in an appropriate training device; or

(2) In operations under this part if performed under supervision of a qualified flight navigator.

(Amdt. 121–55, Eff. 2/2/70)

§ 121.427 Recurrent training.

(a) Recurrent training must ensure that each crewmember or dispatcher is adequately trained and currently proficient with respect to the type airplane (including differences training, if applicable) and crewmember position involved.

(b) Recurrent ground training for crewmembers and dispatchers must include at least the following—

(1) A quiz or other review to determine the state of the crewmember's or dispatcher's knowledge with respect to the airplane and position involved.

(2) Instruction as necessary in the subjects required for initial ground training by § 121.415(a), as appropriate, including emergency training (not required for aircraft dispatchers).

(3) For flight attendants and dispatchers, a competence check as required by §§ 121.421(b) and 121.422(b), respectively.

[(4) Approved recurrent CRM training. For flight crewmembers, this training or portions thereof may be accomplished during an approved simulator line operational flight training (LOFT) session. The recurrent CRM training requirement

(i) Group I, reciprocating powered airplanes, 16 hours;

(ii) Group I turbopropeller powered airplanes, 20 hours; and

(iii) Group II airplanes, 25 hours.

(2) For flight navigators—

(i) Group I reciprocating powered airplanes, 12 hours;

(ii) Group I turbopropeller powered airplanes, 16 hours; and

(iii) Group II airplanes, 16 hours.

(3) For flight attendants—

(i) Group I reciprocating powered airplanes, 4 hours;

(ii) Group I turbopropeller powered airplanes, 5 hours; and

(iii) Group II airplanes, 12 hours.

(4) For aircraft dispatchers—

(i) Group I reciprocating powered airplanes, 8 hours;

(ii) Group I turbopropeller powered airplanes, 10 hours; and

(iii) Group II airplanes, 20 hours.

(d) Recurrent flight training for flight crewmembers must include at least the following—

(1) For pilots, flight training in an approved simulator in maneuvers and procedures set forth in the certificate holder's approved low-altitude windshear flight training program and flight training in maneuvers and procedures set forth in appendix F to this part, or in a flight training program approved by the Administrator, except as follows—

(i) The number of programmed inflight hours is not specified; and

inspection, may be conducted in an airplane simulator or other training device. The preflight inspection may be conducted in an airplane, or by using an approved pictorial means that realistically portrays the location and detail of preflight inspection items and provides for the portrayal of abnormal conditions. Satisfactory completion of an approved line-oriented simulator training program may be substituted for the flight check.

(3) For flight navigators, enough inflight training and an inflight check to ensure competency with respect to operating procedures and navigation equipment to be used and familiarity with essential navigation information pertaining to the certificate holder's routes that require a flight navigator.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–80, Eff. 11/4/71); (Amdt. 121–144, Eff. 6/26/78); (Amdt. 121–199, Eff. 1/2/89); [(Amdt. 121–250, Eff. 3/19/96)]

§ 121.429 Prohibited drugs.

(a) Each certificate holder shall provide each employee performing a function listed in appendix I to this part and his or her supervisor with the training specified in that appendix.

(b) No certificate holder may use any contractor to perform a function listed in appendix I to this part unless that contractor provides each of its employees performing that function for the certificate holder and his or her supervisor with the training specified in that appendix.

Docket No. 25148 (53 FR 47057) Eff. 11/21/88 (Amdt. 121–200, Eff. 12/21/88)

(a) [This subpart:

[(1) Prescribes crewmember qualifications for all certificate holders except where otherwise specified. The qualification requirements of this subpart also apply to each certificate holder that conducts commuter operations under part 135 of this chapter with airplanes for which two pilots are required by the aircraft type certification rules of this chapter. The Administrator may authorize any other certificate holder that conducts operations under part 135 of this chapter to comply with the training and qualification requirements of this subpart instead of subparts E, G, and H of part 135 of this chapter, except that these certificate holders may choose to comply with the operating experience requirements of § 135.344 of this chapter, instead of the requirements of § 121.434; and

[(2) Permits training center personnel authorized under part 142 of this chapter who meet the requirements of §§ 121.411 and 121.413 to provide training, testing and checking under contract or other arrangement to those persons subject to the requirements of this subpart.]

(b) For the purpose of this subpart, the airplane groups and terms and definitions prescribed in § 121.400 and the following definitions apply:

Consolidation is the process by which a person through practice and practical experience increases proficiency in newly acquired knowledge and skills.

Line operating flight time is flight time performed in operations under this part.

Operating cycle is a complete flight segment consisting of a takeoff, climb, enroute portion, descent, and a landing.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–74, Eff. 7/30/71); (Amdt. 121–248, Eff. 8/25/95); (Amdt. 121–250, Eff. 3/19/96); (Amdt. 121–256, Eff. 7/15/96); [(Amdt. 121–259, Eff. 8/1/96)]

§ 121.432 General.

(a) Except in the case of operating experience under § 121.434, a pilot who serves as second in command of an operation that requires three or

(b) No certificate holder may conduct a check or any training in operations under this part, except for the following checks and training required by this part or the certificate holder—

(1) Line checks for pilots.

(2) Flight navigator training conducted under the supervision of a flight navigator flight instructor.

(3) Flight navigator flight checks.

(4) Flight engineer checks (except for emergency procedures), if the person being checked is qualified and current in accordance with § 121.453(a).

(5) Flight attendant training and competence checks.

Except for pilot line checks and flight engineer flight checks, the person being trained or checked may not be used as a required crewmember.

(c) For the purposes of this subpart, the airplane groups prescribed in § 121.400 apply.

(d) For the purposes of this subpart, the terms and definitions in § 121.400 apply.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–130, Eff. 11/26/76)

§ 121.433 Training required.

(a) *Initial training.* No certificate holder may use any person nor may any person serve as a required crewmember on an airplane unless that person has satisfactorily completed, in a training program approved under subpart N of this part, initial ground and flight training for that type airplane and for the particular crewmember position, except as follows—

(1) Crewmembers who have qualified and served as a crewmember on another type airplane of the same group may serve in the same crewmember capacity upon completion of transition training as provided in § 121.415.

(2) Crewmembers who have qualified and served as second in command or flight engineer on a particular type airplane may serve as pilot in command or second in command, respectively,

particular variation of the airplane in which he serves, either initial or transition ground and flight training, or differences training, as provided in § 121.415.

(c) *Recurrent training.*

(1) No certificate holder may use any person nor may any person serve as a required crewmember on an airplane unless, within the preceding 12 calendar months—

(i) For flight crewmembers, he has satisfactorily completed recurrent ground and flight training for that airplane and crewmember position and a flight check, as applicable;

(ii) For flight attendants and dispatchers, he has satisfactorily completed recurrent ground training and a competence check; and

(iii) In addition, for pilots in command, he has satisfactorily completed, within the preceding 6 calendar months, recurrent flight training in addition to the recurrent flight training required in paragraph (c)(1)(i) of this section, in an airplane in which he serves as pilot in command in operations under this part.

(2) For pilots, a proficiency check as provided in § 121.441 of this part may be substituted for the recurrent flight training required by this paragraph and the approved simulator course of training under § 121.409(b) of this part may be substituted for alternate periods of recurrent flight training required in that airplane, except as provided in paragraphs (d) and (e) of this section.

(d) For each airplane in which a pilot serves as pilot in command, he must satisfactorily complete either recurrent flight training or a proficiency check within the preceding 12 calendar months.

(e) Notwithstanding paragraphs (c)(2) and (d) of this section, a proficiency check as provided in § 121.441 of this part may not be substituted for training in those maneuvers and procedures set forth in a certificate holder's approved low-altitude windshear flight training program when that pro-

(a) No certificate holder may use any person to perform and no person may perform, any assigned duties and responsibilities for the handling or carriage of dangerous articles and magnetized materials governed by Title 49 CFR, unless within the preceding 12 calendar months that person has satisfactorily completed training in a program established and approved under this subpart which includes instructions regarding the proper packaging, marking, labeling, and documentation of dangerous articles and magnetized materials, as required by Title 49 CFR and instructions regarding their compatibility, loading, storage, and handling characteristics. A person who satisfactorily completes training in the calendar month before, or the calendar month after, the month in which it becomes due, is considered to have taken that training during the month it became due.

(b) Each certificate holder shall maintain a record of the satisfactory completion of the initial and recurrent training given to crewmembers and ground personnel who perform assigned duties and responsibilities for the handling and carriage of dangerous articles and magnetized materials.

(c) A certificate holder operating in a foreign country where the loading and unloading of aircraft must be performed by personnel of the foreign country, may use personnel not meeting the requirements of paragraphs (a) and (b) of this section if they are supervised by a person qualified under paragraphs (a) and (b) of this section to supervise the loading, offloading and handling of hazardous materials.

Docket No. 12124 (38 FR 14915) Eff. 6/7/73

(Amdt. 121–104, Eff. 7/6/73); (Amdt. 121–130, Eff. 11/26/76); (Amdt. 121–144, Eff. 6/26/78)

§ 121.434 [Operating experience, operating cycles, and consolidation of knowledge and skills.]

(a) [No certificate holder may use a person nor may any person serve as a required crewmember

(2) Pilots who are meeting the pilot-in-command requirements may serve as second in command.

[(3) Separate operating experience, operating cycles, and line operating flight time for consolidation of knowledge and skills are not required for variations within the same type airplane.]

(b) [In acquiring the operating experience, operating cycles, and line operating flight time for consolidation of knowledge and skills, crewmembers must comply with the following:]

(1) In the case of a flight crewmember, he must hold the appropriate certificates and ratings for the crewmember position and the airplane, except that a pilot who is meeting the pilot-in-command requirements must hold the appropriate certificates and ratings for a pilot in command in the airplane.

(2) [The operating experience, operating cycles, and line operating flight time for consolidation of knowledge and skills must be acquired after satisfactory completion of the appropriate ground and flight training for the particular airplane type and crewmember position.]

(3) The experience must be acquired in flight during operations under this part. However, in the case of an aircraft not previously used by the certificate holder in operations under this part, operating experience acquired in the aircraft during proving flights or ferry flights may be used to meet this requirement.

(c) Pilot crewmembers must acquire operating experience [and operating cycles] as follows:

(1) A pilot in command must—

(i) Perform the duties of a pilot in command under the supervision of a check pilot; and

(ii) [In addition, if a qualifying pilot in command is completing initial or upgrade training specified in § 121.424, be observed in the performance of prescribed duties by an FAA inspector during at least one flight leg which includes a takeoff and landing.] During the time that a qualifying pilot in command is acquiring the operating experience in paragraph (c)(1)(i) and (ii) of this section, a check duties of a pilot in command of that type of airplane.

(2) [A second in command pilot must perform the duties of a second in command under the supervision of an appropriately qualified check pilot.

(3) [The hours of operating experience and operating cycles for all pilots are as follows:

(i) [For initial training, 15 hours in Group I reciprocating powered airplanes, 20 hours in Group I turbopropeller powered airplanes, and 25 hours in Group II airplanes. Operating experience in both airplane groups must include at least 4 operating cycles (at least 2 as the pilot flying the airplane).

(ii) [For transition training, except as provided in paragraph (c)(3)(iii) of this section, 10 hours in Group I reciprocating powered airplanes, 12 hours in Group I turbopropeller powered airplanes, 25 hours for pilots in command in Group II airplanes, and 15 hours for second in command pilots in Group II airplanes. Operating experience in both airplane groups must include at least 4 operating cycles (at least 2 as the pilot flying the airplane).]

(iii) In the case of transition training where the certificate holder's approved training program includes a course of training in an airplane simulator under § 121.409(c), each pilot in command must comply with the requirements prescribed in paragraph (c)(3)(i) of this section for initial training.

(d) A flight engineer must perform the duties of a flight engineer under the supervision of a check airman or a qualified flight engineer for at least the following number of hours—

(1) Group I reciprocating powered airplanes, 8 hours.

(2) Group I turbopropeller powered airplanes, 10 hours.

(3) Group II airplanes, 12 hours.

(e) A flight attendant must, for at least 5 hours, perform the assigned duties of a flight attendant under the supervision of a flight attendant supervisor qualified under this part who personally

member. Flight attendants who have satisfactorily completed training time acquired in an approved training program conducted in a full-scale (except for length) cabin training device of the type airplane in which they are to serve may substitute this time for 50 percent of the hours required by this paragraph.

(f) [Flight crewmembers may substitute one additional takeoff and landing for each hour of flight to meet the operating experience requirements of this section, up to a maximum reduction of 50% of flight hours, except those in Group II initial training, and second in command pilots in Group II transition training. Notwithstanding the reductions in programmed hours permitted under §§ 121.405 and 121.409, the hours of operating experience for flight crewmembers are not subject to reduction other than as provided in this paragraph and paragraph (e) of this section.]

[(g) Except as provided in paragraph (h) of this section, pilot-in-command and second-in-command crewmembers must each acquire at least 100 hours of line operating flight time for consolidation of knowledge and skills (including operating experience required under paragraph (c) of this section) within 120 days after the satisfactory completion of:

[(1) Any part of the flight maneuvers and procedures portion of either an airline transport pilot certificate with type rating practical test or an additional type rating practical test, or

[(2) A § 121.441 proficiency check.

[(h) The following exceptions apply to the consolidation requirement of paragraph (g) of this section:

[(1) Pilots who have qualified and served as pilot in command or second in command on a particular type airplane in operations under this part before August 25, 1995, are not required to complete line operating flight time for consolidation of knowledge and skills.

[(2) Pilots who have completed the line operating flight time requirement for consolidation of knowledge and skills while serving as as a pilot in the airplane for which the pilot has newly qualified unless the pilot satisfactorily completes refresher training as provided in the certificate holder's approved training program and that training is conducted by an appropriately qualified instructor or check pilot.

[(4) If the required 100 hours of line operating flight time are not completed within 120 days, the certificate holder may extend the 120-day period to no more than 150 days if—

[(i) The pilot continues to meet all other applicable requirements of subpart O of this part; and

[(ii) On or before the 120th day the pilot satisfactorily completes refresher training conducted by an appropriately qualified instructor or check pilot as provided in the certificate holder's approved training program, or a check pilot determines that the pilot has retained an adequate level of proficiency after observing that pilot in a supervised line operating flight.

[(5) The Administrator, upon application by the certificate holder, may authorize deviations from the requirements of paragraph (g) of this section, by an appropriate amendment to the operations specifications, to the extent warranted by any of the following circumstances:

[(i) A newly certificated certificate holder does not employ any pilots who meet the minimum requirements of paragraph (g) of this section.

[(ii) An existing certificate holder adds to its fleet an airplane type not before proven for use in its operations.

[(iii) A certificate holder establishes a new domicile to which it assigns pilots who will be required to become qualified on the airplanes operated from that domicile.]

[(i)] Notwithstanding the reductions in programmed hours permitted under §§ 121.405 and 121.409 of subpart N of this part, the hours of operating experience for flight crewmembers are not

§ 121.435 [Removed]

[(Amdt. 121–251, Eff. 1/19/96)]

§ 121.437 Pilot qualification: Certificates required.

(a) [No pilot may act as pilot in command of an aircraft (or as second in command of an aircraft in a flag or supplemental operation that requires three or more pilots) unless he holds an airline transport pilot certificate and an appropriate type rating for that aircraft.]

(b) Each pilot who acts as a pilot in a capacity other than those specified in paragraph (a) of this section must hold at least a commercial pilot certificate and an instrument rating.

(c) [No certificate holder may use nor may any pilot act as a pilot in a capacity other than those specified in paragraph (a) of this section unless the pilot holds at least a commercial pilot certificate with appropriate category and class ratings for the aircraft concerned, and an instrument rating.]

(Amdt. 121–144, Eff. 6/26/78); (Amdt. 121–146, Eff. 6/22/78); (Amdt. 121–148, Eff. 12/4/78); (Amdt. 121–151, Eff. 4/23/79); (Amdt. 121–207, Eff. 10/25/89); [(Amdt. 121–253, Eff. 2/26/96)]

[§ 121.438 Pilot operating limitations and pairing requirements.

[(a) If the second in command has fewer than 100 hours of flight time as second in command in operations under this part in the type airplane being flown, and the pilot in command is not an appropriately qualified check pilot, the pilot in command must make all takeoffs and landings in the following situations:

[(1) At special airports designated by the Administrator or at special airports designated by the certificate holder; and

[(2) In any of the following conditions:

[(i) The prevailing visibility value in the latest weather report for the airport is at or below ¾ mile.

[(vi) Windshear is reported in the vicinity of the airport.

[(vii) Any other condition in which the PIC determines it to be prudent to exercise the PIC's prerogative.

[(b) No person may conduct operations under this part unless, for that type airplane, either the pilot in command or the second in command has at least 75 hours of line operating flight time, either as pilot in command or second in command. The Administrator may, upon application by the certificate holder, authorize deviations from the requirements of this paragraph (b) by an appropriate amendment to the operations specifications in any of the following circumstances:

[(1) A newly certificated certificate holder does not employ any pilots who meet the minimum requirements of this paragraph.

[(2) An existing certificate holder adds to its fleet a type airplane not before proven for use in its operations.

[(3) An existing certificate holder establishes a new domicile to which it assigns pilots who will be required to become qualified on the airplanes operated from that domicile.]

[(Amdt. 121–248, Eff. 8/25/95)]

§ 121.439 Pilot qualifications: Recent experience.

(a) No certificate holder may use any person nor may any person serve as a required pilot flight crewmember, unless within the preceding 90 days, that person has made at least three takeoffs and landings in the type airplane in which that person is to serve. The takeoffs and landings required by this paragraph may be performed in a visual simulator approved under § 121.407 to include takeoff and landing maneuvers. In addition, any person who fails to make the three required takeoffs and landings within any consecutive 90-day period must reestablish recency of experience as provided in paragraph (b) of this section.

(b) In addition to meeting all applicable training and checking requirements of this part, a required

(2) The takeoffs and landings required in paragraph (b)(1) of this section must include—

(i) At least one takeoff with a simulated failure of the most critical powerplant;

(ii) At least one landing from an ILS approach to the lowest ILS minimum authorized for the certificate holder; and

(iii) At least one landing to a full stop.

(c) A required pilot flight crewmember who performs the maneuvers prescribed in paragraph (b) of this section in a visual simulator must—

(1) Have previously logged 100 hours of flight time in the same type airplane in which he is to serve;

(2) Be observed on the first two landings made in operations under this part by an approved check airman who acts as pilot in command and occupies a pilot seat. The landings must be made in weather minimums that are not less than those contained in the certificate holder's operations specifications for Category I Operations, and must be made within 45 days following completion of simulator training.

(d) When using a simulator to accomplish any of the requirements of paragraph (a) or (b) of this section, each required flight crewmember position must be occupied by an appropriately qualified person and the simulator must be operated as if in a normal in-flight environment without use of the repositioning features of the simulator.

(e) A check airman who observes the takeoffs and landings prescribed in paragraphs (b)(1) and (c) of this section shall certify that the person being observed is proficient and qualified to perform flight duty in operations under this part and may require any additional maneuvers that are determined necessary to make this certifying statement.

(Amdt. 121–7, Eff. 8/16/65); (Amdt. 121–144, Eff. 6/26/78); (Amdt. 121–148, Eff. 12/4/78); (Amdt. 121–179, Eff. 10/1/82)

§ 121.440 Line checks.

(a) No certificate holder may use any person nor may any person serve as pilot in command of an airplane unless, within the preceding 12 cal-

(2) Consist of at least one flight over a typical part of the [certificate holder's] route, or over a foreign or Federal airway, or over a direct route.

(c) A pilot-in-command line check for supplemental [operations] must—

(1) Be given by a pilot check airman who is currently qualified on the airplane; and

(2) Consist of at least one flight over a part of a Federal airway, foreign airway, or advisory route over which the pilot may be assigned.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–143, Eff. 6/26/78); [(Amdt. 121–253, Eff. 2/26/96)]

§ 121.441 Proficiency checks.

(a) No certificate holder may use any person nor may any person serve as a required pilot flight crewmember unless that person has satisfactorily completed either a proficiency check, or an approved simulator course of training under § 121.409, as follows—

(1) For a pilot in command, a proficiency check within the preceding 12 calendar months and, in addition, within the preceding 6 calendar months, either a proficiency check or the simulator training.

(2) For all other pilots—

(i) Within the preceding 24 calendar months either a proficiency check or the line-oriented simulator training course under § 121.409; and

(ii) Within the preceding 12 calendar months, either a proficiency check or any simulator training course under § 121.409.

The satisfactory completion of a type rating flight check under § 61.157 of this chapter satisfies the requirement for a proficiency check.

(b) Except as provided in paragraph (c) and (d) of this section, a proficiency check must meet the following requirements—

(1) It must include at least the procedures and maneuvers set forth in appendix F to this part unless otherwise specifically provided in that appendix.

(1) The Administrator has not specifically required the particular maneuver or procedure to be performed;

(2) The pilot being checked is, at the time of the check, employed by a certificate holder as a pilot; and

(3) The pilot being checked is currently qualified for operations under this part in the particular type airplane and flight crewmember position or has, within the preceding six calendar months, satisfactorily completed an approved training program from the particular type airplane.

(e) If the pilot being checked fails any of the required maneuvers, the person giving the proficiency check may give additional training to the pilot during the course of the proficiency check. In addition to repeating the maneuvers failed, the person giving the proficiency check may require the pilot being checked to repeat any other maneuvers he finds are necessary to determine the pilot's proficiency. If the pilot being checked is unable to demonstrate satisfactory performance to the person conducting the check, the certificate holder may not use him nor may he serve in operations under this part until he has satisfactorily completed a proficiency check.

However, the entire proficiency check (other than the initial second-in-command proficiency check) required by this section may be conducted in an approved visual simulator if the pilot being checked accomplishes at least two landings in the appropriate airplane during a line check or other check conducted by a pilot check airman (a pilot-in-command may observe and certify the satisfactory accomplishment of these landings by a second-in-command). If a pilot proficiency check is conducted in accordance with this paragraph, the next required proficiency check for that pilot must be conducted in the same manner, or in accordance with appendix F of this part, or a course of training in an airplane

(Amdt. 121–7, Eff. 8/16/65); (Amdt. 121–249, Eff. 4/15/67); (Amdt. 121–55, Eff. 2/2/70)

§ 121.443 Pilot-in-command qualification: Routes and airports.

(a) Each certificate holder shall provide a system acceptable to the Administrator for disseminating the information required by paragraph (b) of this section to the pilot in command and appropriate flight operation personnel. The system must also provide an acceptable means for showing compliance with § 121.445.

(b) No certificate holder may use any person, nor may any person serve, as pilot in command unless the certificate holder has provided that person current information concerning the following subjects pertinent to the areas over which that person is to serve, and to each airport and terminal area into which that person is to operate, and ensures that that person has adequate knowledge of, and the ability to use, the information—

(1) Weather characteristics appropriate to the season.

(2) Navigation facilities.

(3) Communication procedures, including airport visual aids.

(4) Kinds of terrain and obstructions.

(5) Minimum safe flight levels.

(6) En route and terminal area arrival and departure procedures, holding procedures and authorized instrument approach procedures for the airports involved.

(7) Congested areas and physical layout of each airport in the terminal area in which the pilot will operate.

(8) Notices to Airmen.

Docket No. 17897 (45 FR 41594) Eff. 6/19/80

(Amdt. 121–7, Eff. 8/16/65); (Amdt. 121–159, Eff. 8/31/80)

fication.

(b) Except as provided in paragraph (c) of this section, no certificate holder may use any person, nor may any person serve, as pilot in command to or from an airport determined to require special airport qualifications unless, within the preceding 12 calendar months—

(1) The pilot in command or second in command has made an entry to that airport (including a takeoff and landing) while serving as a pilot flight crewmember; or

(2) The pilot in command has qualified by using pictorial means acceptable to the Administrator for that airport.

(c) Paragraph (b) of this section does not apply when an entry to that airport (including a takeoff or a landing) is being made if the ceiling at that airport is at least 1,000 feet above the lowest MEA or MOCA, or initial approach altitude prescribed for the instrument approach procedure for that airport, and the visibility at that airport is at least 3 miles.

(d) No certificate holder may use any person, nor may any person serve, as pilot in command between terminals over a route or area that requires a special type of navigation qualification unless, within the preceding 12 calendar months, that person has demonstrated qualification on the applicable navigation system in a manner acceptable to the Administrator, by one of the following methods—

(1) By flying over a route or area as pilot in command using the applicable special type of navigation system.

(2) By flying over a route or area as pilot in command under the supervision of a check airman using the special type of navigation system.

(3) By completing the training program requirements of appendix G of this part.

Docket No. 17897 (45 FR 41594) Eff. 6/19/80

(Amdt. 121–159, Eff. 8/31/80)

§ 121.447 [Reserved]

(Amdt. 121–159, Eff. 8/31/80)

the certificate holder or the Administrator has checked him on that type airplane and determined that he is familiar and competent with all essential current information and operating procedures.

(b) A flight check given in accordance with § 121.425(a)(2) satisfies the requirements of paragraph (a) of this section.

(Amdt. 121–55, Eff. 2/2/70)

§ 121.455 Use of prohibited drugs.

(a) This section applies to persons who perform a function listed in appendix I to this part for the certificate holder [or operator]. For the purpose of this section, a person who performs such a function pursuant to a contract with the certificate holder is considered to be performing that function for the certificate holder [or operator].

(b) No certificate holder [or operator] may knowingly use any person to perform, nor may any person perform for a certificate holder [or operator], either directly or by contract, any function listed in appendix I to this part while that person has a prohibited drug, as defined in that appendix, in his or her system.

(c) No certificate holder [or operator] shall knowingly use any person to perform, nor shall any person perform for a certificate holder [or operator], either directly or by contract, any safety-sensitive function if the person has a verified positive drug test result on or has refused to submit to a drug test required by appendix I to part 121 of this chapter and the person has not met the requirements of appendix I for returning to the performance of safety-sensitive duties.

Docket No. 25148 (53 FR 47057) Eff. 11/21/88

(Amdt. 121–200, Eff. 12/21/88); (Amdt. 121–240, Eff. 9/19/94); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.457 Testing for prohibited drugs.

(a) Each certificate holder [or operator] shall test each of its employees who performs a function listed in appendix I to this part in accordance with that appendix.

[§ 121.458 Misuse of alcohol.

[(a) *General.* This section applies to employees who perform a function listed in appendix J to this part for a certificate holder (*covered employees*). For the purpose of this section, a person who meets the definition of covered employee in appendix J is considered to be performing the function for the certificate holder.

(b) *Alcohol concentration.* No covered employee shall report for duty or remain on duty requiring the performance of safety-sensitive functions while having an alcohol concentration of 0.04 or greater. No certificate holder having actual knowledge that an employee has an alcohol concentration of 0.04 or greater shall permit the employee to perform or continue to perform safety-sensitive functions.

(c) *On-duty use.* No covered employee shall use alcohol while performing safety-sensitive functions. No certificate holder having actual knowledge that a covered employee is using alcohol while performing safety-sensitive functions shall permit the employee to perform or continue to perform safety-sensitive functions.

(d) *Pre-duty use.*

(1) No covered employee shall perform flight crewmember or flight attendant duties within 8 hours after using alcohol. No certificate holder having actual knowledge that such an employee has used alcohol within 8 hours shall permit the employee to perform or continue to perform the specified duties.

employee who has actual knowledge of an accident involving an aircraft for which he or she performed a safety-sensitive function at or near the time of the accident shall use alcohol for 8 hours following the accident, unless he or she has been given a post-accident test under appendix J of this part, or the employer has determined that the employee's performance could not have contributed to the accident.

(f) *Refusal to submit to a required alcohol test.* No covered employee shall refuse to submit to a post-accident, random, reasonable suspicion, or follow-up alcohol test required under appendix J to this part. No certificate holder shall permit an employee who refuses to submit to such a test to perform or continue to perform safety-sensitive functions.]

[(Amdt. 121–237, Eff. 3/17/94)]

[§ 121.459 Testing for alcohol.

[(a) Each certificate holder must establish an alcohol misuse prevention program in accordance with the provisions of appendix J to this part.

(b) No certificate holder shall use any person who meets the definition of *covered employee* in appendix J to this part to perform a safety-sensitive function listed in that appendix unless such person is subject to testing for alcohol misuse in accordance with the provisions of appendix J.]

[(Amdt. 121–237, Eff. 3/17/94)]

crewmembers on United States registered aircraft engaged in international air commerce. The purpose of the certificate is to facilitate the entry and clearance of those crewmembers into ICAO contracting states. They were issued under Annex 9, as amended, to the Convention on International Civil Aviation.]

(Amdt. 121–253, Eff. 2/26/96); [(Amdt. 121–256, Eff. 7/15/96)]

section, of the air carrier by whom the holder is employed, shall surrender the certificate for cancellation at the nearest FAA Flight Standards District Office at the termination of the holder's employment with that air carrier.]

(Amdt. 121–143, Eff. 9/26/78); (Amdt. 121–207, Eff. 10/25/89); (Amdt. 121–253, Eff. 2/26/96); [(Amdt. 121–256, Eff. 7/15/96)]

This appendix provides guidelines and a means for achieving flightcrew training in advanced airplane simulators. This plan for achieving the goal of advanced simulation consists of three major phases and an interim phase to facilitate the plan's implementation. The three-phase plan is to provide standards for a progressive upgrade of airplane simulators so that the total scope of flightcrew training can be enhanced. Each phase builds on the preceding phase so that the final advanced simulation phase includes all the requirements of preceding phases. This appendix describes the simulator and visual system requirements which must be achieved to obtain approval of certain types of training in the simulator. The requirements in this appendix are in addition to the simulator approval requirements in § 121.407. Each simulator which is used under this appendix must be approved as a [Level B, C, or D] simulator, as appropriate.

To obtain FAA approval of the simulator for a specific phase, the following must be demonstrated to the satisfaction of the Administrator—

1. Documented proof of compliance with the appropriate simulator, visual system, and additional training requirements of this appendix for the phase for which approval is requested and preceding phases, if appropriate.

2. An evaluation of the simulator to ensure that its ground flight, and landing performance matches the type of airplane simulated ([Level B] Approval Tests).

3. An evaluation of the appropriate simulator and visual system requirements of the phase for which approval is requested and preceding phases, if appropriate.

Changes to Simulator Programing.

While a need exists for some flexibility in making changes in the software program, strict scrutiny on these changes is essential to ensure that the simulator retains its ability to duplicate the airplane's flight and ground characteristics. Therefore, the following procedure must be followed to allow these changes without affecting the approval of an appendix H simulator—

1. Twenty-one calendar days before making changes to the software program which might impact flight or ground dynamics of an appendix H simulator, a complete list of these planned changes, including dynamics related to the motion and visual systems, must be provided in writing to the FAA office responsible for conducting the recurrent evaluation of that simulator.

2. If the FAA does not object to the planned change within 21 calendar days, the operator may make the change.

3. Changes which might affect the approved simulator [Level B] test guide must be tested by the operator in the simulator to determine the impact of the change before submission to the FAA.

4. Software changes actually installed must be summarized and provided to the FAA. When the operator's test shows a difference in simulator performance due to a change, an amended copy of the test guide page which includes the new simulator test results will also be provided to update the FAA's copy of the test guide.

5. The FAA may examine supporting data or flight check the simulator, or both, to ensure that the aerodynamic quality of the simulator has not been degraded by any change in software programing.

6. All requests for changes are evaluated on the basis of the same criteria used in the initial approval of the simulator for [Level B, C, or D].

Simulator Minimum Equipment List (MEL).

Because of the strict tolerances and other approval requirements of appendix H simulators, the simulator can provide realistic training with certain nonessential items inoperative. Therefore, an operator may operate its simulator under an MEL which has been approved by the Administrator for that simulator. The MEL includes simulator components and indicates the type of training or checking that is authorized if the component becomes inoperative. To accomplish this, the component is placed in one of the following categories along with any remarks applicable to the component's use in the training program—

1. No training or checking.
2. Training in specific maneuvers.
3. Certification and checking.
4. Line Oriented Flight Training (LOFT).

required in the training program. The advanced simulation training program shall include the following—

1. The operator's initial, transition, upgrade, and recurrent simulator training programs and its procedures for reestablishing recency of experience in the simulator.

2. How the training program will integrate [Levels B, C, and D] simulators with other simulators and training devices to maximize the total training, checking, and certification functions.

3. [Documentation that each instructor and check airman has served for at least 1 year in that capacity in a certificate holder's approved program or has served for at least 1 year as a pilot in command or second in command in an airplane of the group in which that pilot is instructing or checking.]

4. A procedure to ensure that each instructor and check airman actively participates in either an approved regularly scheduled line flying program as a flight crewmember or an approved line observation program in the same airplane type for which that person is instructing or checking.

5. A procedure to ensure that each instructor and check airman is given a minimum of 4 hours of training each year to become familiar with the operator's advanced simulation training program, or changes to it, and to emphasize their respective roles in the program. Training for simulator instructors and check airmen shall include training policies and procedures, instruction methods and techniques, operation of simulator controls (including environmental and trouble panels, limitations of the simulator, and minimum equipment required for each course of training.

6. A special Line Oriented Flight Training (LOFT) program to facilitate the transition from the simulator to line flying. This LOFT program consists of at least a 4-hour course of training for each flightcrew. It also contains at least two representative flight segments of the operator's route. One of the flight segments contains strictly normal operating procedures from push back at one airport to arrival at another. Another flight segment contains training in appropriate abnormal and emergency flight operations.

1. Aerodynamic programing to include—

a. Ground effect-for example, roundout, flare, and touchdown. This requires data on lift, drag, and pitching moment in ground effect.

b. Ground reaction-Reaction of the airplane upon contact with the runway during landing to include strut deflections, tire friction, and side forces.

c. Ground handling characteristics-steering inputs to include crosswind, braking, thrust reversing, deceleration, and turning radius.

2. Minimum of 3-axis freedom of motion systems.

3. [Level B] landing maneuver test guide to verify simulator data with actual airplane flight test data, and provide simulator performance tests for [Level B] initial approval.

4. Multichannel recorders capable of recording [Level B] performance tests.

Visual requirements.

1. Visual system compatibility with aerodynamic programing.

2. Visual system response time from pilot control input to visual system output shall not exceed 300 milliseconds more than the movement of the airplane to a similar input. Visual system response time is defined as the completion of the visual display scan of the first video field containing different information resulting from an abrupt control input.

3. A means of recording the visual response time for comparison with airplane data.

4. Visual cues to assess sink rate and depth perception during landings.

5. Visual scene to instrument correlation to preclude perceptible lags.

[Level C]

Training and checking permitted.

1. For all pilots, transition training between airplanes in the same group, and for a pilot in command the certification check required by § 61.157 of this chapter.

2. [Upgrade to pilot-in-command training and the certification check when the pilot—

tification check when the pilot—

a. Is currently serving as second in command in an airplane of the same group;

b. Has a minimum of 2,500 flight hours as second in command in an airplane of the same group; and

c. Has served as second in command on at least two airplanes of the same group.

[4. For all second-in-command pilot applicants who meet the aeronautical experience requirements of § 61.155 of this chapter in the airplane, the initial and upgrade training and checking required by this part, and the certification check requirements of § 61.157 of this chapter.]

Simulator requirements.

1. Representative crosswind and three-dimensional windshear dynamics based on airplane related data.

2. Representative stopping and directional control forces for at least the following runway conditions based on airplane related data—

a. Dry.

b. Wet.

c. Icy.

d. Patchy wet.

e. Patchy icy.

f. Wet on rubber residue in touchdown zone.

3. Representative brake and tire failure dynamics (including antiskid) and decreased brake efficiency due to high brake temperatures based on airplane related data.

4. A motion system which provides motion cues equal to or better than those provided by a six-axis freedom of motion system.

5. Operational principal navigation systems, including electronic flight instrument systems, INS, and OMEGA, if applicable.

6. Means for quickly and effectively testing simulator programing and hardware.

7. Expanded simulator computer capacity, accuracy, resolution, and dynamic response to meet [Level C] demands. Resolution equivalent to that of at least a 32–bit word length computer is required for critical aerodynamic programs.

by comparing a recording of the control feel dynamics of the simulator to airplane measurements in the takeoff, cruise, and landing configuration.

11. Relative responses of the motion system, visual system, and cockpit instruments shall be coupled closely to provide integrated sensory cues. These systems shall respond to abrupt pitch, roll, and yaw inputs at the pilot's position within 150 milliseconds of the time, but not before the time, when the airplane would respond under the same conditions. Visual scene changes from steady state disturbance shall not occur before the resultant motion onset but within the system dynamic response tolerance of 150 milliseconds. The test to determine compliance with these requirements shall include simultaneously recording the analog output from the pilot's control column and rudders, the output from an accelerometer attached to the motion system platform located at an acceptable location near the pilots' seats, the output signal to the visual system display (including visual analog delays), and the output signal to the pilot's attitude indicator or an equivalent test approved by the Administrator. The test results in a comparison of a recording of the simulator's response to actual airplane response data in the takeoff, cruise, and landing configuration.

Visual requirements.

1. Dusk and night visual scenes with at least three specific airport representations, including a capability of at least 10 levels of occulting, general terrain characteristics, and significant landmarks.

2. Radio navigation aids properly oriented to the airport runway layout.

3. Test procedures to quickly confirm visual system color, RVR, focus, intensity, level horizon, and attitude as compared to the simulator attitude indicator.

4. For the approach and landing phase of flight, at and below an altitude of 2,000 feet height above the airport (HAA) and within a radius of 10 miles from the airport, weather representations including the following—

a. Variable cloud density.

simulated or as required by visual system hardware. Both pilot seat visual systems shall be able to be operated simultaneously.

6. Capability to present ground and air hazards such as another airplane crossing the active runway or converging airborne traffic.

[Phase IIA—Removed]

[Level D]

Training and checking permitted.

Except for the requirements listed in the next sentence, all pilot flight training and checking required by this part and the certification check requirements of § 61.157 and appendix A of part 61 of this chapter. The line check required by § 121.440, the static airplane requirements of appendix E of this part, and the operating experience requirements of § 121.434 must still be performed in the airplane.

Simulator requirements.

1. Characteristic buffet motions that result from operation of the airplane (for example, high-speed buffet, extended landing gear, flaps, nose-wheel scuffing, stall) which can be sensed at the flight deck. The simulator must be programed and instrumented in such a manner that the characteristic buffet modes can be measured and compared to airplane data. Airplane data are also required to define flight deck motions when the airplane is subjected to atmospheric disturbances such as rough air and cobblestone turbulence. General purpose disturbance models that approximate demonstrable flight test data are acceptable.

2. Aerodynamic modeling for aircraft for which an original type certificate is issued after June 1, 1980, including low-altitude, level-flight ground effect, mach effect at high altitude, effects of airframe icing, normal and reverse dynamic thrust effect on control surfaces aero-elastic representations, and representations of nonlinearities due to side slip baced on airplane flight test data provided by the manufacturer.

3. Realistic amplitude and frequency of cockpit noises and sounds, including precipitation static and engine and airframe sounds. The sounds shall be part of the daily discrepancy log required under § 121.407(a)(5).

Visual requirements.

1. Daylight, dusk, and night scenes with sufficient scene content to recognize a specific airport, the terrain, and major landmarks around that airport and to successfully accomplish a visual landing. The daylight visual scene must be part of a total daylight cockpit environment which at least represents the amount of light in the cockpit on an overcast day. For the purpose of this rule, daylight visual system is defined as a visual system capable of producing, as a minimum, full color presentations, scene content comparable in detail to that produced by 4,000 edges or 1,000 surfaces for daylight and 4,000 light points for night and dusk scenes, 6-foot lamberts of light at the pilot's eye (highlight brightness), 3-arc minutes resolution for the field of view at the pilot's eye, and a display which is free of apparent quantization and other distracting visual effects while the simulator is in motion. The simulation of cockpit ambient lighting shall be dynamically consistent with the visual scene displayed. For daylight scenes, such ambient lighting shall neither ''washout'' the displayed visual scene nor fall below 5-foot lamberts of light as reflected from an approach plate at knee height at the pilot's station and/or 2-foot lamberts of light as reflected from the pilot's face.

2. Visual scenes portraying representative physical relationships which are known to cause landing illusions in some pilots, including short runway, landing over water, runway gradient, visual topographic features, and rising terrain.

3. Special weather representations which include the sound, visual, and motion effects of entering light, medium, and heavy precipitation near a thunderstorm on takeoff, approach, and landings at and below an altitude of 2,000 feet HAA and within a radius of 10 miles from the airport.

4. [Level C] visual requirements in daylight as well as dusk and night representations.

5. Wet and, if appropriate for the operator, snow-covered runway representations, including runway lighting effects.

International Trade Impact Analysis

The FAA finds this amendment will have no impact on international trade.

Paperwork Reduction Act

Information collection requirements in this SFAR have previously been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (Pub. L. 96–511) and have been assigned OMB Control Number 2120–0008.

Federalism Implications

The amendment herein would not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this amendment would not have sufficient federalism applications to warrant the preparation of a Federalism Assessment.

Conclusion

The FAA has determined that this document involves an amendment that imposes no additional burden on any person. Accordingly, it has been determined that this action is not significant under Executive Order 12866; it is not significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and the anticipated impact is so minimal that a full regulatory evaluation is not required.

Adoption of the Amendment

In consideration of the foregoing SFAR 38–2 (14 CFR parts 121, 125, 127, 129, and 135) of the Federal Aviation Regulations is amended effective June 1, 1995.

The authority citation for part 121 is revised to read as follows:

Authority: 49 U.S.C. 106(g), 40101, 40105, 40113, 44701–44702, and 44704–44705.

Special Federal Aviation Regulation 38–12

Commuter Operations and General Certification and Operations Requirements

Adopted: December 12, 1995 **Effective: January 19, 1996**

(Published in 60 FR 65832, December 20, 1995)

SUMMARY: This rule requires certain commuter operators that now conduct operations under part 135 to conduct those operations under part 121. The commuter operators affected are those conducting scheduled passenger-carrying operations in airplanes that have passenger-seating configurations of 10 to 30 seats (excluding any crewmember seat) and those conducting scheduled passenger-carrying operations in turbojet airplanes regardless of seating configuration. The rule revises the requirements concerning operating certificates and operations specifications for all part 121, 125, and 135 certificate holders. The rule also requires certain management officials for all certificate holders under parts 121 and 135. The rule is intended to increase safety

Operating Requirements: Domestic Flag, Supplemental, Commuter, and On-Demand Operations: Corrections and Editorial Changes

Adopted: June 4, 1996 **Effective: July 15, 1996**

(Published in 61 FR 30432, June 14, 1996)

SUMMARY: This amendment adopts changes that are editorial or typographical in nature in parts 119, 121, and 135. The changes are necessary to correct errors or clarify the intent of the regulations published on December 20, 1995 (60 FR 65832). The changes in this amendment will not impose any additional restrictions on persons affected by these regulations.

NOTE: Please refer to preamble pages P–1256 through P–1258 for entire preamble.

(a)(1) Certificates.

(a)(2) Certification requirements.

(a)(3) Operating requirements.

(b) Operations conducted under more than one paragraph.

(c) Prohibition against operating without certificate or in violation of operations specifications.

2. Certificates and foreign air carrier operations specifications.

(a) Air Carrier Operating Certificate.

(b) Operating Certificate.

(c) Foreign air carrier operations specifications.

3. Operations specifications.

4. Air carriers and those commercial operators engaged in scheduled intrastate common carriage.

(a)(1) Airplanes, more than 30 seats/7,500 pounds payload, scheduled within 48 States.

(a)(2) Airplanes, more than 30 seats/7,500 pounds payload, scheduled outside 48 States.

(a)(3) Airplanes, more than 30 seats/7,500 pounds payload, not scheduled and all cargo.

(b) Airplanes, 30 seats or less/7,500 or less pounds payload.

(c) Rotorcraft, 30 seats or less/7,500 pounds or less payload.

(d) Rotorcraft, more than 30 seats/more than 7,500 pounds payload.

5. Operations conducted by a person who is not engaged in air carrier operations, but is engaged in passenger operations, cargo operations, or both, as a commercial operator.

(a) Airplanes, 20 or more seats/6,000 or more pounds payload.

(b) Airplanes, less than 20 seats/less than 6,000 pounds payload.

(c) Rotorcraft, 30 seats or less/7,500 pounds or less payload.

(d) Rotorcraft, more than 30 seats/more than 7,500 pounds payload.

6. Definitions.

(a) Terms in FAR.

(1) Domestic/flag/supplemental/commuter.

(2) ATCO.

(b) FAR references to:

(1) Domestic air carriers.

(3) Foreign air carrier.

(4) Scheduled operations.

(5) Size of aircraft.

(6) Maximum payload capacity.

(7) Empty weight.

(8) Maximum zero fuel weight.

(9) Justifiable aircraft equipment.

(1) The types of operating certificates issued by the Federal Aviation Administration;

(2) The certification requirements an operator must meet in order to obtain and hold operations specifications for each type of operation conducted and each class and size of aircraft operated; and

(3) The operating requirements an operator must meet in conducting each type of operation and in operating each class and size of aircraft authorized in its operations specifications.

A person shall be issued only one certificate and all operations shall be conducted under that certificate, regardless of the type of operation or the class or size of aircraft operated. A person holding an air carrier operating certificate may not conduct any operations under the rules of part 125.

(b) Persons conducting operations under more than one paragraph of this SFAR shall meet the certification requirements specified in each paragraph and shall conduct operations in compliance with the requirements of the Federal Action Regulations specified in each paragraph for the operation conducted under that paragraph.

(c) Except as provided under this SFAR, no person may operate as an air carrier or as a commercial operator without, or in violation of, a certificate and operations specifications issued under this SFAR.

[(d) Persons conducting operations under this SFAR shall continue to comply with the applicable requirements of §§ 121.6, 121.57, 121.59, 121.61, 121.71 through 121.83, 135.5, 135.11(c), 135.15, 135.17, 135.27, 135.29, 135.33, 135.35, 135.37, and 135.39 of this chapter as in effect on January 18, 1996, until March 20, 1997, or until the date on which the certificate holder is issued operations specifications in accordance with part 119, whichever occurs first. A copy of these regulations may be obtained from the Federal Aviation Administration, Office of Rulemaking (ARM), 800 Independence Ave., SW., Washington, DC 20591, or by phone (202) 267–9677.]

2. *Certificates and foreign air carrier operations specifications.*

(a) Persons authorized to conduct operations as an air carrier will be issued an Air Carrier Operating Certificate.

(b) Persons who are not authorized to conduct air carrier operations, but who are authorized to conduct passenger, cargo, or both, operations as a commercial operator will be issued an Operating Certificate.

(c) FAA certificates are not issued to foreign air carriers. Persons authorized to conduct operations in the United States as a foreign air carrier who hold a permit issued under Section 402 of the Federal Action Act of 1958, as amended (49 U.S.C. 1372), or other appropriate economic or exemption authority issued by the appropriate agency of the United States of America will be issued operations specifications in accordance with the requirements of part 129 and shall conduct their operations within the United States in accordance with those requirements.

3. *Operations specifications.*

The operations specifications associated with a certificate issued under paragraph 2(a) or (b) and the operations specifications issued under paragraph 2(c) of this SFAR will prescribe

any required crewmember seat, or a payload capacity of more than 7,500 pounds, shall comply with the certification requirements in part 121, and conduct its—

(1) Scheduled operations within the 48 contiguous states of the United States and the District of Columbia, including routes that extend outside the United States that are specifically authorized by the Administrator, with those airplanes in accordance with the requirements of part 121 applicable to domestic air carriers, and shall be issued operations specifications for those operations in accordance with those requirements.

(2) Scheduled operations to points outside the 48 contiguous states of the United States and the District of Columbia with those airplanes in accordance with the requirements of part 121 applicable to flag air carriers, and shall be issued operations specifications for those operations in accordance with those requirements.

(3) All-cargo operations and operations that are not scheduled with those airplanes in accordance with the requirements of part 121 applicable to supplemental air carriers, and shall be issued operations specifications for those operations in accordance with those requirements; except the Administrator may authorize those operations to be conducted under paragraph (4)(a)(1) or (2) of this paragraph.

(b) Airplanes having a maximum passenger seating configuration of 30 seats or less, excluding any required crewmember seat, and a maximum payload capacity of 7,500 pounds or less, shall comply with the certification requirements in part 135, and conduct its operations with those airplanes in accordance with the requirements of part 135, and shall be issued operations specifications for those operations in accordance with those requirements; except that the Administrator may authorize a person conducting operations in transport category airplanes to conduct those operations in accordance with the requirements of paragraph 4(a) of this paragraph.

(c) Rotorcraft having a maximum passenger seating configuration of 30 seats or less and a maximum payload capacity of 7,500 pounds or less shall comply with the certification requirements in part 135, and conduct its operations with those aircraft in accordance with the requirements of part 135, and shall be issued operations specifications for those operations in accordance with those requirements.

(d) Rotorcraft having a passenger seating configuration of more than 30 seats or a payload capacity of more than 7,500 pounds shall comply with the certification requirements in part 135, and conduct its operations with those aircraft in accordance with the requirements of part 135, and shall be issued special operations specifications for those operations in accordance with those requirements and this SFAR.

5. *Operations conducted by a person who is not engaged in air carrier operations, but is engaged in passenger operations, cargo operations, or both, as a commercial operator.*

Each person, other than a person conducting operations under paragraph 2(c) or 4 of this SFAR, who conducts operations with—

(a) Airplanes having a passenger seating configuration of 20 or more, excluding any required crewmember seat, or a maximum payload capacity of 6,000 pounds or more, shall comply with the certification requirements in part 125, and conduct its operations with those airplanes in accordance with the requirements of part 125, and shall be issued operations specifications in accordance with those requirements, or shall comply with an appropriate deviation authority.

with those requirements.

(d) Rotorcraft having a passenger seating configuration of more than 30 seats or a payload capacity of more than 7,500 pounds shall comply with the certification requirements in part 135, and conduct its operations with those aircraft in accordance with the requirements of part 135, and shall be issued special operations specifications for those operations in accordance with those requirements and this SFAR.]

6. *Definitions.*

(a) Wherever in the Federal Aviation Regulations the terms—

(1) ''Domestic air carrier operating certificate,'' ''flag air carrier operating certificate,'' ''supplemental air carrier operating certificate,'' or ''commuter air carrier (in the context of Air Carrier Operating Certificate) appears, it shall be deemed to mean an ''Air Carrier Operating Certificate'' issued and maintained under this SFAR.

(2) ''ATCO operating certificate'' appears, it shall be deemed to mean either an ''Air Carrier Operating Certificate'' or ''Operating Certificate,'' as is appropriate to the context of the regulation. All other references to an operating certificate shall be deemed to mean an ''Operating Certificate'' issued under this SFAR unless the context indicates the reference is to an Air Carrier Operating Certificate.

(b) Wherever in the Federal Aviation Regulations a regulation applies to—

(1) ''Domestic air carriers,'' it will be deemed to mean a regulation that applies to scheduled operations solely within the 48 contiguous states of the United States and the District of Columbia conducted by persons described in paragraph 4(a)(1) of this SFAR.

(2) ''Flag air carriers,'' it will be deemed to mean a regulation that applies to scheduled operations to any point outside the 48 contiguous states of the United States and the District of Columbia conducted by persons described in paragraph 4(a)(2) of this SFAR.

(3) ''Supplemental air carriers,'' it will be deemed to mean a regulation that applies to charter and all-cargo operations conducted by persons described in paragraph 4(a)(3) of this SFAR.

(4) ''Commuter air carriers,'' it will be deemed to mean a regulation that applies to scheduled passenger carrying operations, with a frequency of operations of at least five round trips per week on at least one route between two or more points according to the published flight schedules, conducted by persons described in paragraph 4(b) or (c) of this SFAR. This definition does not apply to part 93 of this chapter.

(c) For the purpose of this SFAR, the term—

(1) ''Air carrier'' means a person who meets the definition of an air carrier as defined in the Federal Aviation Act of 1958, as amended.

(2) ''Commercial operator'' means a person, other than an air carrier, who conducts operations in air commerce carrying persons or property for compensation or hire.

(3) ''Foreign air carrier'' means any person other than a citizen of the United States, who undertakes, whether directly or indirectly or by lease or any other arrangement, to engage in foreign air transportation.

equipment, and less the operating load (consisting of minimum flight crew, foods and beverages, and supplies and equipment related to foods and beverages, but not including disposable fuel or oil).

(ii) For all other aircraft, the maximum certificated takeoff weight of an aircraft, less the empty weight, less all justifiable aircraft equipment, and less the operating load (consisting of minimum fuel load, oil, and flightcrew). The allowance for the weight of the crew, oil, and fuel is as follows:

(A) Crew—200 pounds for each crewmember required by the Federal Aviation Regulations.

(B) Oil—350 pounds.

(C) Fuel—the minimum weight of fuel required by the applicable Federal Aviation Regulations for a flight between domestic points 174 nautical miles apart under VFR weather conditions that does not involve extended overwater operations.

(7) ''Empty weight'' means the weight of the airframe, engines, propellers, rotors, and fixed equipment. Empty weight excludes the weight of the crew and payload, but includes the weight of all fixed ballast, unusable fuel supply, undrainable oil, total quantity of engine coolant, and total quantity of hydraulic fluid.

(8) ''Maximum zero fuel weight'' means the maximum permissible weight of an aircraft with no disposable fuel or oil. The zero fuel weight figure may be found in either the aircraft type certificate data sheet, or the approved Aircraft Flight Manual, or both.

(9) ''Justifiable aircraft equipment'' means any equipment necessary for the operation of the aircraft. It does not include equipment or ballast specifically installed, permanently or otherwise, for the purpose of altering the empty weight of an aircraft to meet the maximum payload capacity.

This Special Federal Aviation Regulation No. 38–2 terminates [March 20, 1997], or the effective date of the codification of SFAR 38–2 into the Federal Aviation Regulations, whichever occurs first.

SUMMARY: This Special Federal Aviation Regulation (SFAR) establishes a voluntary, alternative method for the training, evaluation, certification, and qualification requirements of flight crewmembers, flight attendants, aircraft dispatchers, instructors, evaluators and other operations personnel subject to the training and qualification requirements of 14 CFR parts 121 and 135. The FAA has developed this alternative method in response to recommendations made by representatives from the government, airlines, aircrew professional organizations, and airline industry organizations. The SFAR is designed to improve aircrew performance and allows certificate holders that are subject to the training requirements of parts 121 and 135 to develop innovative training programs that incorporate the most recent advances in training methods and techniques.

NOTE: Please refer to preamble page P–804 for entire preamble.

Special Federal Aviation Regulation 58–1

Advanced Qualification Program

Adopted: September 27, 1995 **Effective: September 27, 1995**

(Published in 60 FR 51850, October 3, 1995)

(Corrected in 60 FR 57334, November 15, 1995)

SUMMARY: The FAA establishes a new termination date for Special Federal Aviation Regulation (SFAR) No. 58 (55 FR 40275; Oct. 2, 1990), which provides for the approval of an alternate method (known as "Advanced Qualification Program" or "AQP") for qualifying, training and certifying, and otherwise ensuring the competency of crewmembers, aircraft dispatchers, other operations personnel, instructors, and evaluators who are required to be trained or qualified under parts 121 and 135 of the FAR. This action will establish a new termination date, of October 2, 2000, for SFAR 58 to allow time for the FAA to complete the rulemaking process that will incorporate SFAR 58 into the Federal Aviation Regulations (FAR).

FOR FURTHER INFORMATION CONTACT: Mr. John Allen, Advanced Qualification Program Branch (AFS–230), Air Transportation Division, Office of Flight Standards, Federal Aviation Administration, P.O. Box 20027, Dulles International Airport, Washington, DC 20041–2027; telephone (703) 661–0260.

SUPPLEMENTARY INFORMATION:

Background

On August 16, 1995, the FAA issued a Notice of Proposed Rulemaking proposing to extend the expiration date of SFAR 58 (60 FR 42764). The comment period closed on September 5, 1995; two comments were received. The Air Line Pilots Association and the Regional Airline Association both supported the extension of SFAR 58 until October 2, 2000. The amendment is adopted as proposed.

burden on any person, the FAA finds that the amendment should be made effective immediately upon issuance. However, interested persons are invited to submit such comments as they desire regarding this amendment. Comments should identify the docket number and be submitted in duplicate to the address above. All communications received on or before the close of the comment period will be considered by the Administrator, and this amendment may be changed in light of the comments received. All comments will be available, both before and after the closing date for comments in the Rules Docket.

Benefit/Cost Analysis

AQP is not mandatory. Consequently, those operators who choose to participate in the program would do so only if it was in their best interest. Enough operators have found it in their best interest that AQP has become an important means for meeting the requirements for air carrier training programs. As of March 1995, 18 carriers and 2 manufacturers have either applied to participate or are already participating in the program. AQP gives air carriers flexibility in meeting the safety goals of the training programs in parts 121 and 135 without sacrificing any of the safety benefits derived from those programs. Thus, extending AQP for another 5 years would not impose any additional costs nor decrease the present level of safety. Because this extension—(1) is extending an existing program; (2) is voluntary; and (3) has become an important means for some operators to comply with the training requirements, the FAA finds that a full detailed regulatory evaluation is not necessary.

International Trade Impact Analysis

The amendment would not constitute a barrier to international trade, including the export of American goods and services to foreign countries and the import of foreign goods and services into the United States. Since air carriers will not participate in AQP unless it was in their best interest, they likewise will not participate if it would impose a competitive disadvantage on them. Also, the concept of AQP is being embraced by foreign operators as well.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress to ensure that small entities are not unnecessarily and disproportionately burdened by Federal regulations. The RFA requires a Regulatory Flexibility Analysis if a rule will have ''significant economic impact on a substantial number of small entities.'' FAA Order 2100.14A outlines the FAA's procedures and criteria for implementing the RFA. Since this action would extend what has become an important means for some air carriers to comply with training requirements, the extension will not impose costs above those that air carriers are already incurring, and certainly not above what they would incur from adopting a part 121 or part 135 training program. Thus, the rule if issued, will not impose a significant economic impact on a substantial number of small entities.

Federalism Implications

The regulation amended herein would not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. Thus, in accordance with Executive Order 12612, it is determined that this regulation does not have federalism implications warranting preparation of a Federalism Assessment.

The authority citation for part 121 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40101, 40105, 40113, 44701–44702, 44704–44705.

Special Federal Aviation Regulation 58–2

Aircraft Flight Simulator Use in Pilot Training, Testing, and Checking and at Training Centers

Adopted: May 23, 1996 **Effective: August 1, 1996**

(Published in 61 FR 34508, July 2, 1996)

SUMMARY: This final rule implements new regulations that contain certification and operating rules for training centers that will use aircraft flight simulators and flight training devices for pilot training, testing, and checking. This rule will increase the use of flight simulators and flight training devices by permitting their use for most airman certification training, testing, and checking tasks. This use of simulation for training, testing, and checking is more liberal than that currently permitted under the Federal Aviation Regulations. The training center concept will provide a common source for standardized, quality training accessible to any individual or corporate operator and air carriers. This action is consistent with a state-of-the-art training concept and recognizes industry recommendations for the expanded use of sophisticated flight simulation. The new rule also adds regulations regarding Category III instrument landing system operations.

NOTE: Please refer to preamble pages P–1280 through P–1343 for entire preamble.

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ner, instructors, and evaluators who are required to be trained or qualified under parts 121 and 135 of the FAR or under this SFAR.

(b) A certificate holder is eligible under this Special Federal Aviation Regulation if the certificate holder is required to have an approved training program under 121.401 or § 135.341 of the FAR, or elects to have an approved training program under § 135.341.

(c) A certificate holder obtains approval of each proposed curriculum under this AQP as specified in section 10 of this SFAR.

(d) A curriculum approved under the AQP may include elements of present part 121 and part 135 training programs. Each curriculum must specify the make, model, and series aircraft (or variant) and each crewmember position or other positions to be covered by that curriculum. Positions to be covered by the AQP must include all flight crewmember positions, instructors, and evaluators and may include other positions, such as flight attendants, aircraft dispatchers, and other operations personnel.

(e) Each certificate holder that obtains approval of an AQP under this SFAR shall comply with all of the requirements of that program.

2. *Definitions.*

As used in this SFAR:

Curriculum means a portion of an Advanced Qualification Program that covers one of three program areas: (1) indoctrination, (2) qualification, or (3) continuing qualification. A qualification or continuing qualification curriculum addresses the required training and qualification activities for a specific make, model, and series aircraft (or variant) and for a specific duty position.

Evaluator means a person who has satisfactorily completed training and evaluation that qualifies that person to evaluate the performance of crewmembers, instructors, other evaluators, aircraft dispatchers, and other operations personnel.

Facility means the physical environment required for training and qualification (e.g., buildings, classrooms).

Training center means [an organization certificated under part 142 of this chapter or an organization approved by the Administrator to operate under the terms of this SFAR to provide training as described in section 1(b) of SFAR 58.]

Variant means a specifically configured aircraft for which the FAA has identified training and qualification requirements that are significantly different from those applicable to other aircraft of the same make, model, and series.

3. *Required Curriculums.*

Each AQP must have separate curriculums for indoctrination, qualification, and continuing qualification as specified in §§ 4, 5, and 6 of this SFAR.

4. *Indoctrination Curriculums.*

Each indoctrination curriculum must include the following:

(d) For evaluators: Evaluation requirements specified in each approved curriculum, including of evaluating crewmembers and aircraft dispatchers and other operations personnel; and policies and practices used to conduct the kinds of evaluations particular to an advanced qualification curriculum (e.g., proficiency and online).

5. *Qualification Curriculums.*

Each qualification curriculum must include the following:

(a) The certificate holder's planned hours of training, evaluation, and supervised operating experience.

(b) A list of and text describing the training, qualification, and certification activities, as applicable for specific positions subject to the AQP, as follows:

(1) *Crewmembers, aircraft dispatchers, and other operations personnel.* Training, evaluation, and certification activities which are aircraft- and equipment-specific to qualify a person for a particular duty position on, or duties related to the operation of a specific make, model, and series aircraft (or variant); a list of and text describing the knowledge requirements, subject materials, job skills, and each maneuver and procedure to be trained and evaluated; the practical test requirements in addition to or in place of the requirements of parts 61, 63, and 65; and a list of and text describing supervised operating experience.

(2) *Instructors.* Training and evaluation to qualify a person to impart instruction on how to operate, or on how to ensure the safe operation of a particular make, model, and series aircraft (or variant).

(3) *Evaluators.* Training, evaluation, and certification activities that are aircraft and equipment specific to qualify a person to evaluate the performance of persons who operate or who ensure the safe operation of, a particular make, model, and series aircraft (or variant).

6. *Continuing Qualification Curriculums.*

Continuing qualification curriculums must comply with the following requirements:

(a) *General.* A continuing qualification curriculum must be based on—

(1) A continuing qualification cycle that ensures that during each cycle each person qualified under an AQP, including instructors and evaluators, will receive a balanced mix of training and evaluation on all events and subjects necessary to ensure that each person maintains the minimum proficiency level of knowledge, skills, and attitudes required for original qualification; and

(2) If applicable, flight crewmember or aircraft dispatcher recency of experience requirements.

(b) *Continuing Qualification Cycle Content.* Each continuing qualification cycle must include at least the following:

(1) *Evaluation period.* An evaluation period during which each person qualified under an AQP must receive at least one training session and a proficiency evaluation at a training facility. The number and frequency of training sessions must be approved by the Administrator. A training session, including any proficiency evaluation completed at that session, that occurs any time during the two calendar months before the last date for completion of an evaluation period can be considered by the certificate holder to be completed in the last calendar month.

(iii) For instructors and evaluators who are limited to conducting their duties in flight simulators and flight training devices: Proficiency training in a flight training device and/or flight simulator regarding operation of this training equipment and in operational flight procedures and maneuvers (normal, abnormal, and emergency).

(3) *Evaluations.* Continuing qualification must include evaluation in all events and major subjects required for original qualification, and online evaluations for pilots in command and other eligible flight crewmembers. Each person qualified under an AQP must successfully complete a proficiency evaluation and, if applicable, an online evaluation during each evaluation period. An individual's proficiency evaluation may be accomplished over several training sessions if a certificate holder provides more than one training session in an evaluation period. The following evaluation requirements apply:

(i) Proficiency evaluations as follows:

(A) For pilots in command, seconds in command, and flight engineers: A proficiency evaluation, portions of which may be conducted in an aircraft, flight simulator, or flight training device as approved in the certificate holder's curriculum which must be completed during each evaluation period.

(B) For any other persons covered by an AQP a means to evaluate their proficiency in the performance of their duties in their assigned tasks in an operational setting.

(ii) Online evaluations as follows:

(A) For pilots in command: An online evaluation conducted in an aircraft during actual flight operations under part 121 or part 135 or during operationally (line) oriented flights, such as ferry flights or proving flights. An online evaluation in an aircraft must be completed in the calendar month that includes the midpoint of the evaluation period. An online evaluation that is satisfactorily completed in the calendar month before or the calendar month after the calendar month in which it becomes due is considered to have been completed during the calendar month it became due. However, in no case is an online evaluation under this paragraph required more often than once during an evaluation period.

(B) During the online evaluations required under paragraph (b)(3)(ii)(A) of this section, each person performing duties as a pilot in command, second in command, or flight engineer for that flight, must be individually evaluated to determine whether he or she—(1) Remains adequately trained and currently proficient with respect to the particular aircraft, crew position, and type of operation in which he or she serves; and (2) Has sufficient knowledge and skills to operate effectively as part of a crew.

(4) *Recency of experience.* For pilots in command and seconds in command, and, if the certificate holder elects, flight engineers and aircraft dispatchers, approved recency of experience requirements.

(c) *Duration periods.* Initially the continuing qualification cycle approved for an AQP may not exceed 26 calendar months and the evaluation period may not exceed 13 calendar months. Thereafter, upon demonstration by a certificate holder that an extension is warranted, the Administrator may approve extensions of the continuing qualification cycle and the evaluation period in increments not exceeding 3 calendar months. However, a continuing qualification cycle may not exceed 39 calendar months and an evaluation period may not exceed 26 calendar months.

(b) Approved training on and evaluation of skills and proficiency of each person being trained under an AQP to use their cockpit resource management skills and their technical (piloting or other) skills in an actual or simulated operations scenario. For flight crewmembers this training and evaluation must be conducted in an approved flight training device or flight simulator.

(c) Data collection procedures that will ensure that the certificate holder provides information from its crewmembers, instructors, and evaluators that will enable the FAA to determine whether the training and evaluations are working to accomplish the overall objectives of the curriculum.

8. *Certification.*

A person enrolled in an AQP is eligible to receive a commercial or airline transport pilot, flight engineer, or aircraft dispatcher certificate or appropriate rating based on the successful completion of training and evaluation events accomplished under that program if the following requirements are met:

(a) Training and evaluation of required knowledge and skills under the AQP must meet minimum certification and rating criteria established by the Administrator in parts 61, 63, or 65. The Administrator may accept substitutes for the practical test requirements of parts 61, 63, or 65, as applicable.

(b) The applicant satisfactorily completes the appropriate qualification curriculum.

(c) The applicant shows competence in required technical knowledge and skills (e.g., piloting) and cockpit resource management knowledge and skills in scenarios that test both types of knowledge and skills together.

(d) The applicant is otherwise eligible under the applicable requirements of part 61, 63, or 65.

9. *Training Devices and Simulators.*

(a) Qualification and approval of flight training devices and flight simulators.

(1) Any training device or simulator that will be used in an AQP for one of the following purposes must be evaluated by the Administrator for assignment of a flight training device or flight simulator qualification level:

(i) Required evaluation of individual or crew proficiency.

(ii) Training activities that determine if an individual or crew is ready for a proficiency evaluation.

(iii) Activities used to meet recency of experience requirements.

(iv) Line Operational Simulations (LOS).

(2) To be eligible to request evaluation for a qualification level of a flight training device or flight simulator an applicant must—

(i) Hold an operating certificate; or

(ii) Be a training center that has applied for authorization to the Administrator or has been authorized by the Administrator to conduct training or qualification under an AQP.

(b) *Approval of other Training Equipment.*

(1) Any training device that is intended to be used in an AQP for purposes other than those set forth in paragraph (a)(1) of this section must be approved by the Administrator for its intended use.

(2) An applicant for approval of a training device under this paragraph must identify the device by its nomenclature and describe its intended use.

(3) Each training device approved for use in an AQP must be part of a continuing program to provide for its serviceability and fitness to perform its intended function as approved by the Administrator.

10. *Approval of Advanced Qualification Program.*

(a) *Approval Process.* Each applicant for approval of an AQP curriculum under this SFAR shall apply for approval of that curriculum. Application for approval is made to the certificate holder's FAA Flight Standards District Office.

(b) *Approval Criteria.* An application for approval of an AQP curriculum will be approved if the program meets the following requirements:

(1) It must be submitted in a form and manner acceptable to the Administrator.

(2) It must meet all of the requirements of this SFAR.

(3) It must indicate specifically the requirements of parts 61, 63, 65, 121 or 135, as applicable, that would be replaced by an AQP curriculum. If a requirement of parts 61, 63, 65, 121, or 135 is replaced by an AQP curriculum, the certificate holder must show how the AQP curriculum provides an equivalent level of safety for each requirement that is replaced. Each applicable requirement of parts 61, 63, 65, 121 or 135 that is not specifically addressed in an AQP curriculum continues to apply to the certificate holder.

(c) *Application and Transition.* Each certificate holder that applies for one or more advanced qualification curriculums or for a revision to a previously approved curriculum must comply with § 121.405 or § 135.325, as applicable, and must include as part of its application a proposed transition plan (containing a calendar of events) for moving from its present approved training to the advanced qualification training.

(d) *Advanced Qualification Program Revisions or Rescissions of Approval.* If after a certificate holder begins operations under an AQP, the Administrator finds that the certificate holder is not meeting the provisions of its approved AQP, the Administrator may require the certificate holder to make revisions in accordance with § 121.405 or § 135.325, as applicable, or to submit and obtain approval for a plan (containing a schedule of events) that the certificate holder must comply with and use to transition to an approved part 121 or part 135 training program, as appropriate.

11. *Approval of Training, Qualification, or Evaluation by a Person who Provides Training by Arrangement.*

(a) A certificate holder under part 121 or part 135 may arrange to have AQP required training, qualification, or evaluation functions performed by another person (a "training center") if the following requirements are met:

(b) An applicant for provisional approval of a curriculum, curriculum segment, or portion of a curriculum segment under this paragraph must show that the following requirements are met:

(1) The applicant must have a curriculum for the qualification and continuing qualification of each instructor or evaluator employed by the applicant.

(2) The applicant's facilities must be found by the Administrator to be adequate for any planned training, qualification, or evaluation for a part 121 or part 135 certificate holder.

(3) Except for indoctrination curriculums, the curriculum, curriculum segment, or portion of a curriculum segment must identify the specific make, model, and series aircraft (or variant) and crewmember or other positions for which it is designed.

(c) A certificate holder who wants approval to use a training center's provisionally approved curriculum, curriculum segment, or portion of a curriculum segment in its AQP, must show that the following requirements are met:

(1) Each instructor or evaluator used by the training center must meet all of the qualification and continuing qualification requirements that apply to employees of the certificate holder that has arranged for the training, including knowledge of the certificate holder's operations.

(2) Each provisionally approved curriculum, curriculum segment, or portion of a curriculum segment must be approved by the Administrator for use in the certificate holder's AQP. The Administrator will either provide approval or require modifications to ensure that each curriculum, curriculum segment, or portion of a curriculum segment is applicable to the certificate holder's AQP.

[(d) Approval for the training, qualification, or evaluation by a person who provides training by arrangement authorized by this section expires on August 3, 1998 unless that person meets the eligibility requirements specified under § 121.402 or § 135.324 of this chapter. After August 2, 1998 approval for the training, qualification, or evaluation, by a person who provides training by arrangement authorized by this section, shall be granted only to persons who meet the eligibility requirements specified under § 121.402 or § 135.234 of this chapter.]

12. *Recordkeeping Requirements.*

Each certificate holder and each training center holding AQP provisional approval shall show that it will establish and maintain records in sufficient detail to establish the training, qualification, and certification of each person qualified under an AQP in accordance with the training, qualification, and certification requirements of this SFAR.

13. *Expiration.*

This Special Federal Aviation Regulation terminates on [October 2, 2000]*, unless sooner terminated.